UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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| In the Matter of | ) | |
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| FIRSTENERGY NUCLEAR OPERATING CO. | ) | Docket No. 50-346-LRA |
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| (Davis-Besse Nuclear Power Station, Unit 1) | ) | |
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# NRC STAFF'S ANSWER TO INTERVENORS' MOTION FOR ADMISSION OF CONTENTION NO. 7 ON WORSENING SHIELD BUILDING CRACKING AND INADEQUATE AMPS IN SHIELD BUILDING MONITORING PROGRAM

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October 3, 2014

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## INTRODUCTION

Pursuant to 10 C.F.R. § 2.309(i)(1) and the Atomic Safety and Licensing Board's (Board) order,[1] the Staff of the U.S. Nuclear Regulatory Commission (Staff) hereby files its answer to the "Intervenors' Motion for Admission of Contention No. 7 on Worsening Shield Building Cracking and Inadequate [Aging Management Programs (AMPs)] in Shield Building Monitoring Program," as amended and supplemented, jointly filed by Beyond Nuclear, Citizens Environment Alliance of Southwestern Ontario, Don't Waste Michigan, and the Green Party of Ohio (collectively,

[1] Order (Granting Unopposed Motion to Establish Consolidated Briefing Schedule for Proposed Contention 7 Admissibility Filings) (Sept. 10, 2014) (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14253A288).

Intervenors)[2] regarding FirstEnergy Nuclear Operating Company's (FENOC) license renewal application (LRA) for Davis-Besse Nuclear Power Station, Unit 1 (Davis-Besse).[3]

As more fully set forth below, the Staff opposes the admission of Contention 7 as amended and supplemented. While the Staff continues to recognize that FENOC's Shield Building Monitoring AMP is within the scope of this license renewal proceeding,[4] Intervenors' Motion to Admit Contention 7 should be denied because Intervenors have not met the Commission's contention admissibility standards for new or amended contentions. Intervenors have not demonstrated that their Motion is timely under 10 C.F.R. § 2.309(f)(2) or that there is good cause for filing after the deadline pursuant to section 2.309(c).[5]

Additionally, Intervenors' Motion to Admit Contention 7 should be denied because it does not meet the Commission's general contention admissibility requirements in 10 C.F.R. § 2.309(f)(1). Specifically, Intervenors' proposed Contention 7: (1) raises issues outside the scope of this proceeding,[6] (2) does not raise a genuine material dispute with the license renewal

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[2] *See* Intervenors' Motion for Admission of Contention No. 7 on Worsening Shield Building Cracking and Inadequate AMPs In Shield Building Monitoring Program (Sept. 2, 2014) (ADAMS Accession No. ML14245A656) (Motion to Admit Contention 7); Intervenors' Motion to Amend and Supplement Contention No. 7 on Worsening Shield Building Cracking and Inadequate AMPs In Shield Building Monitoring Program (Sept. 8, 2014) (ADAMS Accession No. ML14251A609) (Motion to Amend and Supplement Contention 7). Intervenors filed an erratum to their Motion to Amend and Supplement Contention 7 on September 12, 2014. See ADAMS Accession No. ML14255A030. The erratum identified the correct ADAMS Accession number for FENOC's Full Apparent Cause Evaluation.

[3] Letter from Barry S. Allen, Vice President, FENOC to U.S. Nuclear Regulatory Commission (NRC), transmitting the license renewal application for Davis-Besse (Aug. 27, 2010) (ADAMS Accession No. ML102450565) (LRA). The LRA is available at http://www.nrc.gov/reactors/operating/licensing/renewal/applications/davis-besse/davis-besse-lra.pdf.

[4] See NRC Staff's Answer to Motion to Admit New Contention Regarding the Safety Implications of Newly Discovered Shield Building Cracking (Feb. 6, 2012) (ADAMS Accession No. ML12037A200) (recognizing that the LRA should include a discussion of how the shield building cracks are accounted for). *See also* Staff's Dec. 27, 2011 RAI B.2.39-13 (ADAMS Accession No. ML11333A396) (RAI B.2.39-13).

[5] *See infra* at n. 106 (providing explanation for why pre-August 2012 rules apply).

[6] These include (1) arguments that there is a "safety culture" issue at Davis-Besse, (2) assertions that the cracks discovered on October 10, 2011 in the shield building constitute a safety issue during the current operating period, and (3) assertions that the concrete void and damaged rebar problems identified

application, and (3) lacks an adequate basis because it offers only bare assertions that the Shield Building Monitoring AMP and the draft Supplemental Environmental Impact Statement (DSEIS) are inadequate.

Finally, to the extent that Intervenors' Motion to Admit Contention 7 attempts to relitigate issues already decided with respect to Intervenors' proposed Contention 5, as amended and/or supplemented,[7] and Intervenors' proposed Contention 6[8] relating to the shield building, the Motion should be denied as an improper request for reconsideration. Any challenges to LBP-12-27 or the Board's Contention 6 Order are untimely and not a proper subject for a contention.[9]

For all the foregoing reasons, Intervenors' Motion to Admit Contention 7 should be denied.

## BACKGROUND

This proceeding concerns FENOC's August 27, 2010 application to renew its operating license for Davis-Besse for an additional twenty years from the current expiration date of April

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in February 2014 and the previously unidentified cracks discovered in August/September 2013 in the shield building constitute a safety issue during the current operating period.

[7] See *FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), LBP-12-27, 76 NRC 583 (2012) (order denying motions to admit, to amend, and to supplement Intervenors' proposed Contention 5 related to the shield building cracking).

[8] Memorandum and Order (Denying Intervenors' Motion for Admission of Contention No. 6 on Shield Building Concrete Void, Cracking and Broken Rebar Problems) (July 25, 2014) (unpublished) (ADAMS Accession No. ML14206A719) (Contention 6 Order) (order denying motion for admission of Intervenors' proposed Contention 6 related to the shield building concrete void, cracking, and broken rebar problems).

[9] 10 C.F.R. § 2.323(e) (providing ten days for filing of motion for reconsideration of action); *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), LBP-91-39, 34 NRC 273, 282 (1991); *Northeast Nuclear Energy Co.* (Millstone Nuclear Power Station, Unit 3), LBP-98-28, 48 NRC 279 (1998). The Board has previously warned Intervenors about their filing practices, including the timeliness of their submissions. *See, e.g.,* Memorandum and Order (Granting Motion To Strike and Requiring Re-filing of Reply) (Feb. 18, 2011) (ADAMS Accession No. ML110490269).

22, 2017.[10] The Staff accepted the LRA for review, and published a *Federal Register* Notice on October 25, 2010, providing a Notice of Opportunity for Hearing.[11]

I. Shield Building: Purpose and Function and the LRA's Shield Building Monitoring AMP

Intervenors' proposed Contention 7 raises generalized complaints regarding the adequacy of FENOC's Shield Building Monitoring AMP, as revised by LRA Amendment 51 (i.e., FENOC's July 3, 2014 RAI Response). To put these challenges in context, it is helpful to understand the purpose and function of the shield building and the Shield Building Monitoring AMP.

A. Purpose and Function of the Shield Building

The shield building is described in Davis-Besse's Updated Safety Analysis Report (USAR) and in FENOC's LRA.[12] Specifically, the USAR states that Davis-Besse's containment system consists of two structures: a steel containment vessel[13] and a reinforced concrete shield building.[14] An annular space is provided between the wall of the containment vessel and the shield building, and clearance is also provided between the containment vessel and the dome of the shield building. With the exception of the concrete under the containment vessel there are no structural ties between the containment vessel and the shield building above the foundation

[10] LRA at 1.0-1. If the LRA is approved, Davis-Besse's new license expiration date would be April 22, 2037.

[11] Notice of Acceptance for Docketing of the Application, Notice of Opportunity for Hearing for Facility Operating License No. NPF–003 for an Additional 20-Year Period; FirstEnergy Nuclear Operating Company, Davis-Besse Nuclear Power Station, Unit 1, 75 Fed. Reg. 65,528 (Oct. 25, 2010).

[12] See USAR at 1.2.10 and 3.8.2.2; See LRA at Section 2.4.1.

[13] The containment vessel is designed to withstand accident pressures and temperatures. USAR at 1.2.10.1, 3.8.2.1.

[14] USAR at 1.2.10.1, 3.8.2.2.

slab.[15] Above this there is virtually unlimited freedom for differential movement between the containment vessel and the shield building.[16]

The reinforced concrete shield building was designed in accordance with ACI 307-69, Specification for the Design and Construction of Reinforced Concrete Chimneys, and checked by the Ultimate Strength Design Method in accordance with ACI 318-63. Load combinations specified in ACI 307-69 provide the design basis of the shield building.[17]

The shield building is designed to provide biological shielding during normal operation and from hypothetical accident conditions. The building provides a means for collection and filtration of fission product leakage from the containment vessel following a hypothetical accident through the Emergency Ventilation System, an engineered safety feature designed for that purpose. In addition, the building provides environmental protection for the containment vessel from adverse atmospheric conditions and external missiles.[18] It is the steel containment vessel, not the shield building, that is designed to keep the radiation inside the reactor from reaching the environment.[19]

B. Shield Building Monitoring AMP

In October 2011, cracks were identified in the "architectural shoulders" of the shield building.[20] Further investigation identified additional cracks in the shield building, including

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[15] In other words, both structures are free-standing.

[16] USAR at 1.2.10.2, 3.8.2.

[17] *Id*. at 1.2.10.1, 3.8.2.2.

[18] *Id*. at 1.2.10.2, 3.8.2.2.

[19] See USAR at 1.2.10.1, 3.8.2.1

[20] See Q&As for Davis-Besse Shield Building Issues, *available at* http://www.nrc.gov/info-finder/reactor/davi/davis-besse-shield-building-qa.pdf. *See also* RAI B.2.39-13.

cracking that "could affect the structural integrity of the shield building and may impact its ability to perform its intended function during the period of extended operation."[21]

Given this operational experience, the Staff issued an RAI on December 27, 2011. In particular, the Staff asked FENOC to summarize the shield building degradation, the root cause, and the expected corrective actions.[22] The Staff also asked FENOC to provide information on "how the recent plant-specific operating experience impacts the Shield Building's ability to perform its intended functions during the period of extended operation."[23] Further, the Staff asked FENOC to explain "how the recent plant-specific operating experience will be incorporated into the Structures Monitoring Program AMP, and whether the current program will be adequate to manage aging of the shield building during the period of extended operation, based on this operating experience."[24] Additionally, the Staff asked FENOC to "[i]dentify and explain any changes to the [LRA] based on the recent plant specific experience."[25]

In response, FENOC submitted a Shield Building Monitoring Program on April 5, 2012. FENOC's April 5, 2012 submittal noted that "[a]lthough the laminar cracking degradation of the concrete for the Shield Building was not caused by an aging mechanism, it is prudent to establish a plant-specific [AMP] to include monitoring methods to identify aging effects that may occur in the future."[26] "The Shield Building Monitoring Program is designed to identify and

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[21] RAI B.2.39-13. The NRC authorized restart of the reactor on December 2, 2011, after independent NRC evaluations, analyses, and inspections confirmed that the shield building was able to perform its intended safety functions. CAL No. 3-11-001, Confirmatory Action Letter – Davis-Besse Nuclear Power Station (Dec. 2, 2011) (ADAMS Accession No. ML11336A355).

[22] RAI B.2.39-13.

[23] *Id*. NRC also requested "a list of any additional aging effects that may require management based on this operating experience." *Id*.

[24] *Id*.

[25] *Id*.

[26] Reply to [RAI] for the Review of the [Davis-Besse LRA] (TAC No. ME4640) and [LRA] Amendment No. 25 (Apr. 5, 2012) (L-12-028) (ADAMS Accession No. ML12097A520) at Page 14-15 of 15.

evaluate potential aging effects within the Shield Building walls"[27] and to "identify and evaluate any loss of preventive action effectiveness of the exterior Shield Building concrete coating, once it has been selected and applied."[28] Thus, the Shield Building Monitoring AMP's purpose was: to ensure that the effects of aging on the intended function(s) of the shield building will be adequately managed for the period of extended operation.[29] In achieving this purpose, the AMP stated that it will periodically inspect the shield building "to confirm that there are no changes in the nature of the identified laminar cracks."[30] In addition, other AMPs, including the Structures Monitoring AMP, are tailored to address other cracking and aging-effects and are administered in conjunction with the Shield Building Monitoring AMP.[31]

The Shield Building Monitoring AMP has been revised several times since it was first submitted. For example, the AMP was revised on August 16, 2012 and November 20, 2012.[32] While the AMP was revised, the purpose of the AMP remained similar to the stated purpose in the April 5, 2012 AMP.[33] In August/September 2013, additional cracks were identified in the shield building. In February 2014, rebar damage in the construction opening area for the steam

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[27] *Id.* at Page 15 of 15.

[28] *Id*. As noted in FENOC's July 3, 2014 submittal, the shield building coatings were applied in 2012.

[29] *See* 10 C.F.R. § 54.21(c)(iii).

[30] L-12-028 at Page 5 of 8.

[31] L-12-028 at Page 6 of 8.

[32] The Staff found the Nov. 20, 2012 version of the Shield Building Monitoring AMP acceptable. See Staff's Safety Evaluation Report Related to the License Renewal of Davis-Besse Nuclear Power Station (Sept. 3, 2013) (SER) (ADAMS Accession No. ML13248A267) at 3-169. However, given the recent operating experience, the Staff's evaluation of this issue is ongoing. See, e.g., Staff's April 15, 2014 RAI B.2.43-3 (ADAMS Accession No. ML14097A454) and Staff's Sept. 29, 2014 RAI (ADAMS Accession No. ML14258A285).

[33] See L-12-028 at Page 6, 7 and 10-15. See L-12-284 Davis-Besse Nuclear Power Station, Unit No. 1 Docket No. 50-346, License Number NPF-3, Reply to [RAI] for the Review of the Davis-Besse Nuclear Power Station, Unit No. 1, License Renewal Application (TAC No. ME4640) and License Renewal Application Amendment No. 31 (Aug. 16, 2012) (ADAMS Accession No. ML12230A220) (L-12-284) at Page 4 to 12 of 12 and ADAMS Accession No. ML12331A125 Enclosure L-12-418 at Page 2 - 11 of 11.

generator replacement was discovered. On April 15, 2014, the Staff issued an RAI asking FENOC if it planned to make any modifications or enhancements to any applicable AMPs to account for this cracking and rebar damage or provide a basis for not making changes.[34]

On July 3, 2014, FENOC responded to this RAI by submitting revisions to the Shield Building Monitoring AMP based on the newly discovered cracks, but not the rebar damage.[35] Among other things, the revised Shield Building Monitoring AMP increased the minimum number of core bores inspected and increased the frequency of inspections. On July 8, 2014, FENOC submitted a Full Apparent Cause Evaluation for the shield building laminar crack propagation to the Board and other parties.[36]

II. Intervenors' Contentions 5 and 6 Related to the Shield Building

Since the initial discovery of shield building cracking in October 2011, the Intervenors have filed two shield building contentions (5 and 6) as well as five motions to amend and/or supplement Contention 5. The Staff's Answer to Intervenors' Contention 6 provided a detailed description of these filings and their basis,[37] so the Staff will not repeat it at length here.[38]

In short, the Board denied Intervenors' motion to admit proposed Contention 5 related to shield building cracking and the five subsequent motions to supplement or amend Contention

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[34] RAI B.2.43-3.

[35] FENOC's July 3, 2014 RAI Response (ADAMS Accession No. ML14184B184). FENOC determined that the rebar was damaged by the physical process used for creation of the construction opening and was not an aging effect.

[36] ADAMS Accession No. ML14189A452 at Enclosure 2.

[37] See NRC Staff's Answer to Motion for Admission of Contention No. 6 On Shield Building Concrete Void, Cracking and Broken Rebar Problems (May 16, 2014) (ADAMS Accession No. ML14136A327) (Staff Answer to Contention 6) (discussing Intervenors' initial request for hearing; the discovery of shield building cracking in 2011; the subsequent discovery of additional shield building cracking, concrete voids and rebar damage; and Intervenors' proposed Contentions 5, as amended and/or supplemented, and 6 related to the shield building; the Board's ruling dismissing Contention 5, as supplemented and/or amended).

[38] The Board's Contention 6 Order also provides a summary of the procedural background of this proceeding, as well as the Board's reasons for denying Contention 6.

5.[39] Proposed Contention 5 claimed that the October 2011 shield building cracking raised both safety and environmental concerns and that the LRA was inadequate for failing to discuss how the aging effect of these cracks would be managed and how they impacted the Severe Accident Mitigation Alternatives (SAMA) analysis.[40] Notably, Intervenors' motions to amend and/or supplement Contention 5 asserted that the Shield Building Monitoring AMP was inadequate; in each instance, the Board held that the Intervenors failed to specifically challenge the adequacy of the Shield Building Monitoring AMP and found these challenges inadmissible.[41]

The Board also denied Intervenors' motion to admit proposed Contention 6. Proposed Contention 6 related to the additional shield building cracking discovered in August/September of 2013 and the discovery of concrete voids and rebar cracking in February 2014. Intervenors' Proposed Contention 6 also contained challenges to the adequacy of the Shield Building Monitoring AMP and challenges to the sufficiency of previous modifications made to the AMP.[42] The Board held that these challenges were inadmissible because Intervenors did not make clear why the AMP was deficient, or how the AMP should be improved.[43] Thus, the Board held that these challenges did not raise a genuine dispute with the LRA or a material issue.

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[39] *Davis-Besse*, LBP-12-27, 76 NRC 583 (2012) (LBP-12-27).

[40] Motion for Admission of Contention No. 5 on Shield Building Cracking (Jan. 10, 2012) (ADAMS Accession No. ML12010A172).

[41] See LBP-12-27; *see also* Contention 6 Order at 13 – 14 ("In fact, Intervenors' failure to specifically challenge the adequacy of the Shield Building Monitoring AMP in Contention 5, and the five related motions to amend, resulted in the Board's denial of the admission of Contention 5."). *See also id*. ("Because Contention 6 suffers from the same underlying flaw as Contention 5 (not raising a genuine dispute with the LRA), the Board must deny Contention 6.") (internal citations omitted).

[42] Contention 6 Order at 13 (citing Motion for Admission of Contention No. 6 on Shield Building Concrete Void, Cracking and Broken Rebar Problems (Apr. 21, 2014) (ADAMS Accession No. ML14112A007) at 26-27 and 2 (Contention 6 Motion)).

[43] Contention 6 Order at 13 (citing Contention 6 Motion generally). *See also id*. ("Intervenors allege that the 'cracking problem has proven not to be susceptible of management under AMP commitments in place since 2012,' but Intervenors do not state how the AMPs are deficient.").

The Board also denied as premature Intervenors' Contention 6 claims about anticipated future modifications to the relevant AMPs.[44] The Board noted that "the modifications to Davis-Besse's Shield Building Monitoring Program, anticipated by the Intervenors, were provided on July 3, 2014 in Amendment No. 51 to the Davis-Besse LRA."[45] The Board stated that Intervenors could submit their specific concerns with "specific portions of LRA Amendment No. 51" in a timely manner for its consideration.[46]

III. Proposed Contention 7, As Amended and Supplemented

On September 2, 2014, Intervenors filed their Motion for Admission of Contention 7, based in part on FENOC's July 3, 2014 LRA Amendment No. 51.[47] On September 8, 2014, Intervenors filed a Motion to Amend and Supplement Contention 7, which was based on FENOC's Full Apparent Cause Evaluation, which was submitted as Enclosure 2 of FENOC's July 8, 2014 Board notification letter.[48]

Intervenors' proposed Contention 7 as amended and supplemented states:

> FENOC's revisions to the AMPs in its Shield Building Monitoring Program, dated July 3, 2014, acknowledge not only the risk, but the reality, of aging-related cracking propagation – that is, worsening – in the already severely cracked Shield Building, an admission which brings the issue within the scope of this License Renewal Application proceeding. FENOC's proposed modifications to its Shield Building Monitoring Program AMPs, regarding the scope (areas of the

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[44] Contention 6 Order at 16 (noting Intervenors claim that they "seek to litigate the adequacy of FENOC's *anticipated modifications* to Davis-Besse's Shield Building Monitoring Program and the Structures Monitoring AMPs.") (emphasis in original). *Id.* (denying these claims as premature because they fail to meet the requirements of 10 C.F.R. § 2.309(f)(1)(iv)).

[45] Contention 6 Order at 16 (citing FENOC's July 3, 2014 RAI Response).

[46] Contention 6 Order at 16.

[47] *See, e.g.*, Motion to Admit Contention 7 at 7; id. at 8, 9. As discussed below, Intervenors' Motion to Admit Contention 7 is also based on its previous filings related to proposed Contentions 5 and 6.

[48] Motion to Amend and Supplement Contention 7 at 4 ("noting that the Full Apparent Cause Evaluation is the "focus" of the motion). *See id*. at 15-17 (claiming that the Full Apparent Cause Evaluation is new and materially different information). FENOC filed an unopposed motion for a consolidated briefing schedule, which the Board granted, setting the date for FENOC and Staff's answers at October 3, 2014 and Intervenors' reply at October 10, 2014.

> Shield Building to be examined), sample size (number of tests to be performed), and the frequency of its surveillance activities, are woefully inadequate. Significantly more core bores, as well as a broader diversity of complementary testing methods should be required, and at a much greater frequency than FENOC has proposed. The cracking phenomena must be identified, analyzed, and addressed within the Final Supplemental Environmental Impact Statement for the license renewal both in the consideration of alternatives to granting the 20-year license extension for Davis-Besse as well as in the Severe Accident Mitigation Alternatives analysis (SAMA). The cracking problems do not support a conclusion that there is "reasonable assurance" that Davis-Besse can be operated in a manner protective of the public health and safety under the Atomic Energy Act during the 20-year proposed license extension period.[49]

Thus, Intervenors' proposed Contention 7 raises both safety and environmental claims. Specifically, Intervenors seek to litigate the adequacy of the modifications to the Shield Building Monitoring Program made by FENOC's July 3, 2014 LRA Amendment 51[50] and the Staff's Draft Supplemental Environmental Impact Statement (DSEIS).[51] For the reasons discussed below, Intervenors' Motion to Admit Contention 7 as amended and supplemented should be denied.

## DISCUSSION

Intervenors' Motion to Admit Contention 7, as amended and supplemented, should be denied because Intervenors have not demonstrated that their claims support a late-filed contention or meet the Commission's contention admissibility requirements. Further, proposed Contention 7 should be denied to the extent it seeks to relitigate Contentions 5 and 6.

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[49] Motion to Amend and Supplement Contention 7 at 2 (internal citations and emphasis omitted).

[50] This is referred to in this answer as L-14-224, the July 3, 2014 RAI Response, and the July 3, 2014 submittal. The Intervenors also seek to litigate anticipated future AMP changes. Motion to Amend and Supplement Contention 7 at 2. However, as the Board explained in the Contention 6 Order, such claims are premature and should be denied.

[51] Motion to Admit Contention 7 at 8-9. Intervenors' Motion to Amend and Supplement refers to the Final SEIS. *Id*. at 2. However, since the FSEIS is not yet published, the Staff reads this as a challenge that the DSEIS is insufficient.

## I. INTERVENORS' PROPOSED CONTENTION 7 DOES NOT MEET THE REQUIREMENTS FOR A LATE-FILED CONTENTION

Intervenors' Motion to Admit Contention 7 should be denied because proposed Contention 7 does not meet the Commission's contention admissibility standards for new or amended contentions.

### A. The Commission's Late-Filed Contention Admissibility Standards

Proposed Contention 7 is a late-filed contention, because it is being filed after the deadline for receipt of petitions to intervene has passed.[52] Therefore, to be admitted in this proceeding, proposed Contention 7 must meet the admissibility requirements for new or amended contentions filed after the deadline[53] and the general admissibility requirements for a contention.[54] In order to admit their new contention under 10 C.F.R. § 2.309(f)(2), Intervenors must show that the information upon which Contention 7 is based was not previously available, that such information is materially different than information previously available, and that they submitted the contention in a timely fashion based on the availability of the information.

Pursuant to the Board's initial scheduling order (ISO), a new contention is deemed timely under 10 C.F.R. § 2.309(f)(2)(iii) if it is filed within sixty days of the date when the information on which it is based first becomes available to the moving party through service, publication, or any other means.[55]

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[52] In this proceeding, the initial filing deadline was December 27, 2010. See Notice of Acceptance for Docketing of the Application, Notice of Opportunity for Hearing for Facility Operating License No. NPF-003 for an Additional 20-Year Period; FirstEnergy Nuclear Operating Company, Davis-Besse Nuclear Power Station, Unit 1, 75 Fed. Reg. 65,528, 65,529 (Oct. 25, 2010).

[53] *Davis-Besse*, LBP-12-27, 76 NRC at 591. *See* Board's Initial Scheduling Order (ISO) (June 15, 2011) (unpublished) (ADAMS Accession No. ML111662021). Intervenors did not address, much less satisfy, the timeliness requirements of 10 C.F.R. § 2.309(c). See Motion to Amend and Supplement Contention 7 at 16 (asserting that their contention is not subject to 10 C.F.R. § 2.309(c) because it is timely under § 2.309(f)(2)).

[54] 10 C.F.R. § 2.309(f)(1)(i)-(vi).

[55] ISO at 12. "If filed thereafter, the motion and proposed contention shall be deemed nontimely under 10 C.F.R. § 2.309(c)." *Id*.

The Commission has made several points clear when discussing what constitutes new and materially different information for purposes of 10 C.F.R. § 2.309(f)(2). First, when a petitioner's motion makes little effort to meet the pleading requirements governing late-filed contentions, that in and of itself constitutes sufficient grounds for rejecting the petitioner's motion.[56] For example, the Commission has stated that a petitioner's failure to address the factors in 10 C.F.R. § 2.309(f)(2) or 10 C.F.R. § 2.309(c) is reason enough to reject the motion.[57] Second, petitioners cannot just point to "documents merely summarizing earlier documents or compiling preexisting, publicly available information into a single source" as doing so does not "render 'new' the summarized or compiled information."[58] As the Commission noted in *Prairie Island*,[59] a "petitioner or intervenor [cannot] delay filing a contention until a document becomes available that collects, summarizes and places into context the facts supporting that contention. To conclude otherwise would turn on its head the regulatory requirement that new contentions be based on 'information … *not previously available.*'"[60]

Third, the Commission has made clear that alleged new and materially different information must support the proposed contention.[61] Thus, the Commission has noted that

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[56] *Florida Power & Light Co., FPL Energy Seabrook, LLC, FPL Energy Duane Arnold, LLC, Constellation Energy Group, Inc.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2; Calvert Cliffs Independent Spent Fuel Storage Installation; Nine Mile Point Nuclear Station, Units 1 and 2; R.E. Ginna Nuclear Power Plant; Turkey Point Nuclear Generating Plant, Units 3 and 4; St. Lucie Nuclear Power Plant, Units 1 and 2; Seabrook Station; Duane Arnold Energy Center), CLI-06-21, 64 NRC 30, 33 (2006).

[57] *Id.* (noting that petitioner did not address any of the factors in 10 C.F.R. § 2.309(f)(2) and did not address two of the factors in 10 C.F.R. § 2.309(c)).

[58] *Entergy Nuclear Vermont Yankee, L.L.C. and Entergy Nuclear Operations, Inc*. (Vermont Yankee Nuclear Power Station), CLI-11-2, 73 NRC 333, 344 (2011).

[59] *Northern States Power Co*. (Prairie Island Nuclear Generating Plant, Units 1 and 2), CLI-10-27, 72 NRC 481, 496 (2010).

[60] *Id*. (internal citations omitted) (emphasis in original)

[61] *See Prairie Island*, CLI-10-27, 72 NRC at 493-94 (noting that the SER petitioners cited to as having new and materially different information did not provide support for the contention and so did not contain new or materially different information).

alleged new and materially different information must articulate a "reasonably apparent" foundation for the contention.[62] Fourth, simply rehashing old arguments is not enough to meet the materially different standard in 10 C.F.R. § 2.309(f)(2)(ii).[63] Instead, the Commission has stated that petitioners filing amended contentions must show how their arguments supporting the contention differ from their previous arguments.[64] Finally, the Commission considers information new and materially different when the Staff is considering the information for the first time in responding to issues relevant to the contention.[65]

B. Intervenors Have Not Demonstrated That Contention 7 Raises New and Materially Different Information Under 10 C.F.R. § 2.309(f)(2)

Intervenors' Motion for Admission of Contention 7 asserts that it is based on supposedly new and materially different information contained in FENOC's July 3, 2013 RAI Response and the Full Apparent Cause Evaluation.[66] Intervenors also base their Motion to Admit Contention 7 on arguments made and documents submitted in support of Contention 5 and 6.[67] For the reasons discussed below, Intervenors have not demonstrated that any of the information in their Motion constitutes new and materially different information under 10 C.F.R. § 2.309(f)(2).

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[62] *Id.* at 495.

[63] *See Entergy Nuclear Vermont Yankee, L.L.C. and Entergy Nuclear Operations, Inc*. (Vermont Yankee Nuclear Power Station), CLI-10-17, 72 NRC 1, 53 (2010).

[64] *Id*.

[65] *See Pa'ina Hawaii, LLC*, (Materials License Application), CLI-10-18, 72 NRC 56, 79 (2010).

[66] See Motion to Admit Contention 7 at 9-10; See Motion to Amend and Supplement Contention 7 at 2-4.

[67] See, e.g., Motion to Admit Contention 7 at 3 (incorporating contention 5 filings and exhibits). While Intervenors' Motion primarily makes assertions regarding FENOC's July 3, 2014 Submittal and the Full Apparent Cause Evaluation, Intervenors also raise challenges to the Staff's DSEIS, which was published on February 26, 2014. *Id.* at 5-6.

1. Intervenors Have Not Shown That Information In FENOC's July 3, 2014 RAI Response or Full Apparent Cause Evaluation Is New and Materially Different

Intervenors claim that Contention 7, as amended and corrected, is timely because their Motion was filed within 60 days of FENOC's July 8, 2014 notification to the Board of their July 3, 2014 RAI response letter and accompanying enclosures.[68] In particular, Intervenors claim that "FENOC's cracking-related AMP modifications to its [Shield Building] monitoring program represent significant, new, material information."[69] Intervenors assert that the Board "indicated" that Contention 7 is based on materially different information than information previously available[70] because the Board "point[ed] out this opportunity for Intervenors to file a new contention."[71]

As an initial matter, the Board did not indicate that any new contention based on FENOC's July 3, 2014 submittal would be based on materially different information than information previously available. Instead, the Board only indicated that Intervenors would have an opportunity to raise challenges to FENOC's RAI Response and that the Board would consider such a challenge. The Board did not excuse Intervenors from having to demonstrate that information in FENOC's July 3, 2014 submittal was both new and materially different than information previously available.

As discussed below, Intervenors have not demonstrated that FENOC's July 3, 2014 RAI Response or the Full Apparent Cause Evaluation contain new and materially different information than information previously available. Intervenors assume without discussion or

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[68] *See* Motion to Admit Contention 7 at 9-10 ("Intervenors could not file this contention regarding 'modifications to Davis-Besse's Shield Building Monitoring Program' until they were published, less than sixty (60) days ago.").

[69] Motion to Admit Contention 7 at 10.

[70] *Id*.

[71] *Id*.

analysis that the information is new because the RAI Response and Full Apparent Cause Evaluation were provided on July 3, 2014 and July 8, 2014, respectively. But Intervenors cannot simply point to a newly provided document without carefully analyzing the information that was previously provided to the newly worded information in FENOC's RAI Response and the Full Apparent Cause Evaluation. The Commission has repeatedly stressed that Intervenors cannot wait until the information is neatly assembled or compiled before filing a contention.[72]

A careful review of FENOC's Shield Building Monitoring AMP and Structures Monitoring AMP demonstrate that although FENOC's July 3, 2014 submittal modified the Shield Building Monitoring AMP and explicitly identified and clarified its description of certain actions, provisions for making such changes based on industry and plant-specific operating experience, including results of previous inspections, were already part and parcel of the existing Shield Building Monitoring AMP and the Structures Monitoring AMP.[73] Further, Intervenors have not shown that any information contained in their Contention 5 and 6 filings is new and materially different information. Instead, Intervenors rehash old arguments without indicating why those arguments support admissibility of their proposed Contention 7. As such, Intervenors have not shown that Contention 7 is based on new and materially different information. Intervenors also have not pled or demonstrated that their Motion shows the necessary "good cause' to excuse their late filing. Thus, Contention 7 is inadmissible.

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[72] *Prairie Island*, CLI-10-27, 72 NRC at 496 (2010).

[73] *See, e.g.*, the last two paragraphs of the "Operating Experience" program element of the Shield Building Monitoring AMP dated August 16, 2012 and November 20, 2012 or the last paragraph of the Shield Building Monitoring AMP dated April 5, 2012.

a. The New Cracking Mechanism Is Not Material to the Adequacy of the AMPs or Materially Different Than Information Previously Available

Intervenors appear to argue[74] that FENOC's July 3, 2014 RAI response contains new and materially different information than previously available because it admits that the cracking propagation is aging-related.[75] Intervenors state that the Staff "previously argued before this [Board] that the … cracking-related contentions are not proper for adjudication because … the cracking was not age-related."[76] This assertion is simply incorrect. The Staff has consistently indicated that the mechanism for the original shield building cracks and any cracking mechanism is not material to the adequacy of the AMPs. Instead, the Staff's aging management review focuses on managing the functionality of SSC's, not identifying and mitigating aging mechanisms.

As previously discussed, the Shield Building Monitoring AMP has been part of the Davis-Besse LRA since April 2012. Since that time, the AMP's purpose and method for monitoring and addressing shield building cracks (inspections and core bores) has not changed in any material manner. Intervenors have not indicated why the method provided in the Shield Building Monitoring AMP (i.e., monitoring the shield building for additional cracking, trending any changes in the cracks, and evaluating the impacts of the cracks through the Corrective Action Program) is inadequate.[77] That same method to manage the cracks exists in the Shield Building Monitoring AMP, as modified by FENOC's July 3, 2014 submittal. Intervenors do not

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[74] It appears that this is Intervenors' argument, although they do not raise it in the section of their Motion which discusses why the proposed contention meets the 10 C.F.R. § 2.309(f)(2) criteria. Instead, this argument is discussed for why the proposed contention meets 10 C.F.R. § 2.309(f)(1). The only statement in the 10 C.F.R. § 2.309(f)(2) section of their Motion is that there is materially different information because the July 3, 2014 submittal made modifications to the Shield Building Monitoring AMP. *See* Motion to Admit Contention 7 at 10-11.

[75] Motion to Admit Contention 7 at 11-12; *id.* at 26.

[76] *Id*. at 26.

[77] See LBP-12-27, 76 NRC 583 at 602-605 and Contention 6 Order at 13-14 (rejecting previous challenges to the adequacy of the Shield Building Monitoring AMP).

explain or even attempt to analyze how the aging-related cracking propagation mechanism information is different than the information already acknowledged and accounted for by the existing AMPs. Thus, Intervenors do not demonstrate that this information is new and materially different information than information previously available.

Intervenors seemingly assert that identification of a new cracking propagation mechanism was not anticipated by the Shield Building Monitoring AMP.[78] But the Shield Building Monitoring AMP always anticipated that aging-related cracking propagation (i.e., aging effects characterized by discernible change in crack width or development of new visible cracks in corebores with no previous visible cracks) might be identified in the future and had methods to address these issues. For example, the operating experience section of the April 5, 2012 Shield Building Monitoring AMP stated that:

> Although the laminar cracking degradation of the concrete for the Shield Building was not caused by an aging mechanism, it is prudent to establish a plant-specific Aging Management Program to include monitoring methods to identify aging effects that may occur in the future. The Shield Building Monitoring Program is designed to identify and evaluate potential aging effects within the Shield Building walls.[79]

With respect to ice wedging, the Shield Building Monitoring AMP explicitly indicated that it would examine potential aging mechanisms related to freezing of water that has permeated the concrete structure, corrosion of the rebar, and coating effectiveness.[80] The Shield Building Monitoring AMP, as modified by FENOC's July 3, 2014 submittal, still indicates that it will identify and/or examine potential aging mechanisms. Thus, the issues related to the identification of a cracking propagation mechanism are simply not new and materially different

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[78] Motion to Admit Contention 7 at 7-8.

[79] L-12-028 at Page 14-15.

[80] L-12-418 at 6.

information than information that has been available to the Intervenors since FENOC first proposed an AMP for the shield building in 2012.

b. FENOC's July 3, 2014 RAI Response Does Not Change Its Position on the Root Cause of the Initial Shield Building Cracks

Intervenors appear to argue that FENOC's July 3, 2014 submittal contains materially different information than previously available because it "admits" that the root cause of the initial shield building cracking was aging-related. For example, Intervenors assert that the cracking "is ongoing; the stated root cause ("Blizzard of '78' moisture penetration and freezing) no longer holds, well, water."[81] Further, Intervenors argue that FENOC's July 3, 2014 submittal

> admit[s] what was clear to Intervenors since 2011: the calculations of NRC staff engineers[82] which suggest that the Shield Building is permeated by cracking which threatens the continued usefulness and stability of the [shield building] itself, and the burgeoning evidence of increasing cracking, must be conceded validity, and there are serious questions surrounding the basis for granting a 20-year extension of Davis-Bess's operating life which must be adjudicated in this license renewal proceeding.[83]

As an initial matter, these statements are unsupported. FENOC's submittal does not "admit" these things. There are no NRC Staff calculations suggesting that this cracking "threatens" the usefulness and stability of the shield building. And nothing in FENOC's July 3, 2014 submittal or the Full Apparent Cause Evaluation actually suggests that FENOC's root cause determination for the laminar cracking is incorrect or has changed. In fact the Full Apparent Cause Evaluation states that "the conclusion of RCA-1 that all the examined cracks were a result of a one-time event, i.e., the 1978 Blizzard which produced extreme high stress to

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[81] Motion to Admit Contention 7 at 6.

[82] The Staff presumes Intervenors are referring to the calculations they discuss on page 5 of their Motion to Admit Contention 7. The Staff has explained that this is not what those calculations meant. *See, e.g.*, NRC Staff Affidavit of Abdul H. Sheikh Concerning Intervenors' Motion for Admission of Contention No. 5 (Mar. 8, 2012) (ADAMS Accession No. ML12068A094) (Sheikh Affidavit).

[83] Motion to Amend and Supplement Contention 7 at 3.

cause general delamination, is still valid."[84] Thus, contrary to Intervenors' claims, the root cause of the laminar cracking has not changed.[85]

Moreover, even assuming that FENOC's July 3, 2014 submittal or the Full Apparent Cause Evaluation did state that the root cause of the laminar cracking had changed, Intervenors do not indicate why that would be materially different information than information previously available. As discussed above, the root cause is not determinative of the Shield Building Monitoring AMP's adequacy and the Shield Building Monitoring AMP always contemplated that an aging-related mechanism could be discovered. Further, Intervenors' assertions about the "continued usefulness" of the shield building are related to concerns with the current operation of the plant, which are not within the scope of this license renewal proceeding and therefore do not support the admissibility of the contention.

c. Intervenors Do Not Demonstrate that Modifications Made to the Shield Building Monitoring AMP Are New and Materially Different Information

Intervenors make a variety of challenges to the modifications made by FENOC's July 3, 2014 submittal. However none of Intervenors' general or specific challenges support admission of Contention 7 because they do not indicate how the changes are new and materially different information than information previously available.

i. Non-specific Challenges

Intervenors generally assert that changes to certain language in FENOC's description of its Shield Building Monitoring AMP are material changes to the AMP. For example, Intervenors "assert that various sections of *the italicized text and underlined text*, identified below contain significant new material information …"[86] Intervenors essentially ask the Board and the parties to look through FENOC's July 3, 2014 RAI Response and identify the issues that might support

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[84] Full Apparent Cause Evaluation at 41.

[85] Full Apparent Cause Evaluation at 41; compare Motion to Admit Contention 7 at 26.

[86] Motion to Admit Contention 7 at 14 (italics in original and underlining added).

their contention.[87] Notably, these kind of conclusory assertions of new and materially different information have been rejected by this Board previously.[88] Here too, these general challenges should be rejected. Intervenors do not indicate how any of the various sections of italicized or underlined text in the modified Shield Building Monitoring AMP are new and materially different information than information previously available.

ii. Challenges Based on Changes Made By the July 3, 2014 RAI Response

Intervenors also point to specific changes made by FENOC's July 3, 2014 RAI Response and argue that these changes are new and materially different information. But a careful review of the previous versions of the Shield Building Monitoring AMP show that the July 3, 2014 RAI Response only made clarifying changes that do not change the intent or implementation of the AMP program or made changes that have been explicitly contemplated by the Operating Experience of the previous versions of the AMP. As such, the July 3, 2014 changes do not constitute new and materially different information; instead, they are merely updates to the AMP to reflect recent Operating Experience.

For example, Intervenors point out that FENOC changed one sentence in the Shield Building Monitoring AMP to read "The locations of the core bores" to "The location for the inspections."[89] But Intervenors do not indicate why this change is materially different information. And in fact, there is no material change. This change in language has no actual or intended impact on the AMP; it is simply a better way to express the same concept.

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[87] Motion to Admit Contention 7 at 14.

[88] LBP-12-27, 76 NRC 583, 603-604 (rejecting Intervenors' claims that changes in the Revised Root Cause Report were new and materially different information than information previously available).

[89] Motion to Admit Contention 7 at 16.

Likewise, FENOC's addition of the statement "[i]n addition, past evidence of crack propagation will be considered in choosing future inspection locations"[90] is not new and materially different information than information previously available. The April 5, 2012 Shield Building Monitoring AMP had already identified that augmented inspections might be required based on the inspections performed. Specifically, the April 5, 2012 Shield Building Monitoring AMP stated that

> Observed conditions, testing results or chemical analyses results may indicate a need to conduct augmented inspections, testing or analyses. American Concrete Institute (ACI) Report 349.3R, "Evaluation of Existing Nuclear Safety-Related Concrete Structures," and ANSI/ASCE 11-90, "Guideline for Structural Condition Assessments of Existing Buildings," provide guidance for selection of parameters to be monitored or inspected.[91]

Thus, the fact that FENOC's July 3, 2014 submittal modified the Shield Building Monitoring AMP to repeat this information in other portions of the AMP is not new or materially different from the information already present in the AMP. Thus, Intervenors cannot support the admission of a late-filed contention based on this language.

Similarly, the fact that FENOC's July 3, 2014 submittal increased the inspections[92] is not new and materially different information. The Shield Building Monitoring AMP previously contemplated increasing inspections based on operating experience. Therefore, the fact that FENOC is now increasing inspections based on operating experience is not new and materially different information than information previously available.[93]

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[90] Motion to Admit Contention 7 at 18 (pointing to FENOC's July 3, 2014 submittal).

[91] L-12-028 at Page 11-12 of 15. *See also* L-12-418 at 6 (stating that observed conditions may indicate a need to conduct augmented inspections).

[92] Motion to Admit Contention 7 at 21-22 (claiming that inspection frequency increase needed beyond increase made by July 3, 2014 RAI Response).

[93] Moreover, as discussed below, these assertions do not support the admissibility of this contention because they do not raise a material dispute with the application.

For similar reasons, the addition of 3 core bores is not new and materially different information than information previously available.[94] Notably, the addition of core bores for additional inspections was explicitly contemplated by the augmented inspection discussed above. Thus, this update to the AMP does not support the admissibility of Contention 7. Likewise, the fact that large portions of the shield building are excluded from "further examination" under FENOC's proposed Shield Building Monitoring AMP[95] is not new and materially different information. As Intervenors note, the change made by FENOC's July 3, 2014 submittal was to change the number of core bores from 20 to a minimum of 23.[96] Therefore, the change actually increased inspection and reduced the extent of the shield building that would go unmonitored. Thus, Intervenors' challenge does not demonstrate that there is new and materially different information.[97]

d. Intervenors' Challenges Should Be Rejected For the Reasons Discussed in Oyster Creek

Even assuming *arguendo* that FENOC's July 3, 2014 revisions to its Shield Building Monitoring AMP were new and materially different information, they still would not support the admission of Contention 7. FENOC's July 3, 2014 submittal revised the existing Shield Building Monitoring AMP by adding requirements based on operating experience (e.g., selecting 3 additional core bores and doing augmented inspections). Thus, Intervenors' proposed Contention 7 is a contention challenging enhancements to an existing AMP based on the addition of increased requirements.

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[94] Motion to Admit Contention 7 at 20-21 (questioning the addition of only 3 core bores).

[95] *Id*. at 21.

[96] Motion to Admit Contention 7 at 23-24.

[97] Moreover, as discussed below, Intervenors have not established that an enhancement in inspections results in an inadequate AMP.

Under the Commission's decision in *Oyster Creek*,[98] Intervenors' proposed Contention 7 should be dismissed because Intervenors have not successfully challenged the Shield Building Monitoring AMP without these enhancements. In *Oyster Creek*, the Commission addressed contentions that raise challenges to existing AMPs based on the addition of increased inspections or requirements. The Commission affirmed the Board's reasoning that contention admissibility should not establish disincentives for applicants and licensees to make improvements.[99] The Commission affirmed two independent reasons to reject contentions challenging improvements made to AMPs. First, the Commission affirmed that contention admissibility should not have the perverse effect of discouraging improvement by allowing challenges to be raised when Applicants make enhancements to programs that have not been challenged previously.[100] Second, the Commission found that the Board was reasonable for rejecting the new contention on the following basis:

> [A]s a matter of law and logic, if – as [Intervenors] allege – [Applicant's] *enhanced* monitoring program is inadequate, then [Applicant's] *unenhanced* monitoring program embodied in its [license renewal application] was *a fortiori* inadequate, and [Intervenor] had a regulatory obligation to challenge it in their original Petition [t]o Intervene.
>
> We see no error in this reasoning and find it equally sound when the Board later applied it to reject a proposed contention concerning a new program for monitoring ….[101]

Similarly, in this proceeding, Intervenors failed to adequately challenge the Shield Building Monitoring AMP when it was first introduced.[102] Therefore, Intervenors' challenges to the July 3,

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[98] *Amergen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235 (2009) (Oyster Creek).

[99] *Oyster Creek*, 69 NRC at 274.

[100] *Id*.

[101] *Id*.

[102] See LBP-12-27 and Contention 6 Order (finding that Intervenors' various claims that the Shield Building Monitoring AMP was inadequate were inadmissible).

2014 improvements to the AMP are simply untimely as a matter of law and logic. Intervenors had the opportunity to raise a challenge to the adequacy of the core bores inspected, the inspection frequency, and the scope of the AMP when the AMP was proposed. But Intervenors failed to raise these issues properly before the Board and cannot now justify their untimeliness simply because FENOC is making improvements to its program.

2. Intervenors Do Not Demonstrate That Information Related to Their Contention 5 or 6 Filings is New or Materially Different Information Than Information Previously Available

In support of Contention 7, Intervenors incorporate by reference all of their pleadings related to Contention 5 and re-state many of its Contention 6 arguments. However, Intervenors have not indicated how any of the information in those filings, including the Staff's DSEIS, the Revised Root Cause Report, a 2012 NRC Inspection Report, or information related to the October 2011 cracking, the additional cracking, concrete void or rebar damage, contain new or materially different information.

The information in Intervenors' Contention 5 and 6 filings is not new because Intervenors' Contentions 5 and 6 were both filed more than sixty days prior to the filing of Contention 7. Intervenors make no effort to justify the untimeliness of these assertions and do not explain how Contentions 5's and 6's filing are actually relevant to Contention 7, other than to imply that Contentions 5 and 6 should not have been rejected.[103] This does not demonstrate that the information is new; instead, as discussed below, it appears to be an impermissibly late argument that the Board's decisions in LBP-12-27 and the Contention 6 Order were incorrect.

Moreover, Intervenors do not demonstrate that information in their Contention 5 and 6 filings is materially different information than information previously available. Both the parties and the Board have already considered the information in those filings as it related to the shield

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[103] *See, e.g.*, Motion to Admit Contention 7 at 3-4 (claiming that Contention 5 was "flatly rejected"); *id*. at 5 (claiming previous contention was summarily rejected before the discovery of new cracks in August/September 2013).

building cracking, the concrete void, and the rebar issue. And the Board rejected all of Intervenors' Contention 5 and 6 arguments. Repeating these previously rejected arguments here cannot support the admissibility of Intervenors' proposed Contention 7.[104]

Intervenors also do not indicate why any of their previously rejected arguments or filings present materially different information given the information in FENOC's July 3, 2014 submittal or the Full Apparent Cause Evaluation. It is not for the Board or the parties to search through Intervenors' voluminous previous pleadings and divine theories that might support the admission of a contention. Thus, this information does not support admission of Contention 7. Finally, these claims do not support admission of Contention 7 because, as discussed below, they do not meet 10 C.F.R. § 2.309(f)(1).

Because Intervenors do not specify how information they were aware of more than 60 days before Contention 7 was filed is materially different from information that was made publicly available within 60 days of filing Contention 7, as required by the Board's ISO, Intervenors' Motion for Admission of Contention 7 is untimely under 10 C.F.R. § 2.309(f)(2).

3. Intervenors Have Not Shown Good Cause For Untimely Filing

Further, Intervenors' proposed Contention 7 should not be admitted because Intervenors do not meet the non-timely standards in 10 C.F.R. § 2.309(c). As the Board explained in LBP-12-27, a "contention that does not meet the timeliness requirements of 10 C.F.R. § 2.309(f)(2)(i)-(iii) might be admissible as a nontimely contention under 10 C.F.R. § 2.309(c)."[105] Section 2.309(c) provides "an eight-factor balancing test to determine whether the nontimely contention should be admitted.[106] Of the eight factors, the first factor -- good cause

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[104] *Vermont Yankee*, CLI-10-17, 72 NRC 53 (2010) (rehashing not enough).

[105] *Davis-Besse*, LBP-12-27, 76 NRC at 593 (internal citations omitted).

[106] *Id*. Intervenors' Motion and Staff's Answer refer to section 2.309(c) prior to the August 3, 2012 amendment to the regulations. *See* Amendments to Adjudicatory Process Rules and Related Requirements; Final Rule, 77 Fed. Reg. 46,561 (Aug. 3, 2012) (eliminating the eight late-filed factors and

for the failure to file on time -- is afforded the most weight."[107] Intervenors have the burden to demonstrate "that a balancing of the factors weighs in favor of granting the petition."[108]

Intervenors do not address, much less meet, the good cause requirements. Thus, Intervenors have not demonstrated good cause for its late filed Contention 7 under 10 C.F.R. § 2.309(c).

II. Intervenors' Proposed Contention 7 Does Not Meet the 10 C.F.R. § 2.309(f)(1) Requirements

Intervenors' proposed Contention 7 should also be denied because it does not meet the Commission's general contention admissibility standards in 10 C.F.R. § 2.309(f). Pursuant to § 2.309(f)(1), a contention must provide:

> (1) a specific statement of the legal or factual issue sought to be raised; (2) a brief explanation of its basis; (3) a concise statement of the alleged facts or expert opinions, including references to specific sources and documents, that support the petitioner's position and upon which the petitioner intends to rely at hearing; and (4) sufficient information demonstrating that a genuine dispute exists with regard to a material issue of law or fact, including references to specific portions of the application that the petitioner disputes, or in the case when the application is alleged to be deficient, the identification of such deficiencies and supporting reasons for this belief. In addition, the petitioner must demonstrate that the issue raised in the contention is both "within the scope of the proceeding" and "material to the findings the NRC must make to support the action that is involved in the proceeding."[109]

"A failure to meet any of these criteria renders the contention inadmissible."[110]

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providing simplified late-filed criteria based on good cause). The parties in this proceeding did not request to amend the Board's ISO, which cites to the pre-August 2012 version of the rule. See ISO. This ISO continues to govern the conduct of this proceeding. *See* Notice from Board at 2 (Aug. 22, 2012) (ADAMS Accession No. ML12235A283). In any event, under both the old 2.309(c) or current 2.309(f)(2) test, the crux is whether a petitioner has shown good cause. *See* 77 Fed. Reg. at 46,566. Intervenors have not shown good cause under either test.

[107] *Davis-Besse*, LBP-12-27, 76 NRC at 593-594 (internal citations omitted).

[108] *Id*. at 594 (internal cites omitted).

[109] *Davis-Besse*, LBP-12-27, 76 NRC at 583 (internal citation omitted).

[110] Contention 6 Order at 6. *See also* LBP-12-27, 76 NRC at 592 (citing *South Carolina Elec. & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-1, 71 NRC 1, 7 & n.33 (2010)).

Intervenors' proposed Contention 7, like their proposed Contentions 5 and 6, makes both safety and environmental claims. As discussed below, Intervenors proposed Contention 7 should not be admitted because it: raises issues that are beyond the scope of this proceeding, does not raise a genuine material dispute with the application, and lacks an adequate basis.

A. Contention 7 is Beyond the Scope of the Proceeding to the Extent It Makes "Safety Culture" Claims and Raises Current Safety Issues

1. Contention 7's Safety Culture Claims Are Outside the Scope of License Renewal

As the Board explained in both LBP-12-27 and the Board's Contention 6 Order, NRC regulations limit the scope of a license renewal proceeding to specific matters that must be considered for the license renewal application to be granted.[111] All contentions must be within the scope of the proceeding; any contention that falls outside the specified scope of the proceeding must be rejected.[112]

Despite the Board's clear rulings in LBP-12-27 and the Contention 6 Order that "safety culture" claims are outside the scope of license renewal,[113] Intervenors offer multiple "safety culture" claims in support of proposed Contention 7. For example, Intervernors restate their Contention 6 argument that "FENOC may be incapable of managing Davis-Besse safely and successfully through the proposed license extension period of 2017-2037"[114] because of repeated problems with voids in the concrete, and a seemingly open-ended problem with the spreading of laminar and other cracks throughout the Shield Building.[115]

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[111] LBP-12-27, 76 NRC at 594; Contention 6 Order at 9 (citing Nuclear Power Plant License Renewal; Revisions, 60 Fed. Reg. 22,461 (May 8, 1995) (Final Rule); Nuclear Power Plant License Renewal, 56 Fed. Reg. 64,943 (Dec. 13, 1991).

[112] Contention 6 Order at 9. 10 C.F.R. § 2.309(f)(1)(iii).

[113] *Davis-Besse*, LBP-12-27 76 NRC at 610-611; Contention 6 Order at 10.

[114] Motion to Admit Contention 7 at 2. See Motion to Admit Contention 6 at 2 (stating same).

[115] Motion to Admit Contention 7 at 2.

Intervenors also claim that there is a genuine dispute because "FENOC's credibility as nuclear manager and operator of Davis-Besse is brought squarely into focus by the revelations that the root cause(s)…do not adequately encompass or explain the cracking phenomenon."[116] Further, Intervenors claim that FENOC's approach to the shield building cracking demonstrates the same sort of "inattention" that occurred with the initial root cause[117] and that FENOC "was either concealing, or, at best, ignorant of the significance of, the presence of water in the [shield building] walls."[118] Moreover, Intervenors assert that FENOC's actions were based not on safety, but on economics.[119] And once again, Intervenors point to the corrosion of Davis-Besse's reactor lid in 2002[120] and imply that FENOC is putting "profits ahead of public safety" in its handling of the shield building cracking.[121] Intervenors also imply that FENOC and the NRC are colluding on the shield building issue, with FENOC committing licensing and design basis violations and NRC ignoring those violations.[122]

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[116] Motion to Amend and Supplement Contention 7 at 24.

[117] Motion to Admit Contention 7 at 19. *See id*. at 21 (claiming that FENOC "arbitrarily excluded large sections of the Shield Building from further examination under its proposed AMPs"); *id*. at 21 (claiming that "*known* cracking has failed to prompt action at Davis-Besse") (emphasis in original); *id*. at 28 (asserting that "FENOC overlooked pre-existing cracks"). *See also* Motion to Amend and Supplement Contention 7 at 6.

[118] Motion to Amend and Supplement Contention 7 at 13.

[119] Motion to Admit Contention 7 at 32 (stating that FENOC "chose not to seal the Shield Building in the early 1970s, or afterwards, until August 2012, apparently in order to save money. FENOC is responsible for its actions, and inactions."). *See also* Motion to Amend and Supplement Contention 7 at 6 ("So the Shield Building was left wide open to damaging water infiltration, from above, the sides, and below, as well as inside-out, probably for economic reasons.").

[120] *See* Motion to Admit Contention 7 at 35. Intervenors referenced this in both Contentions 5 and 6. *See, e.g.*, Contention 6 Motion at 27, 31. The Board has previously cautioned the Intervenors from making unsupported claims of fraud or wrongdoing. *See, e.g.*, Board Order (Granting in Part and Denying in Part Motion to Strike) (Oct. 11, 2012) (ADAMS Accession No. ML12285A373).

[121] Motion to Admit Contention 7 at 35.

[122] Motion to Admit Contention 7 at 25. *Id.* at 27-28 (calling FENOC's conclusions "suspect" and FENOC's compliance with licensing and design bases "dubious at best").

Intervenor's "safety culture" claims amount to a challenge that Davis-Besse is unsafe to operate currently and/or during the period of extended operation based on past operational experience. The Commission and this Board has found that such "safety culture" contentions are outside the scope of license renewal, as they impermissibly raise issues that are relevant to current plant operation and are being addressed by the NRC's established and ongoing oversight activities.[123] Thus, these "safety culture" claims are inadmissible. To the extent Intervenors believe there are existing operational issues at Davis-Besse that warrant immediate action, their remedy is to file a § 2.206 petition.

2. Contention 7 is Beyond the Scope of the Proceeding to the Extent It Raises Current Safety Issues

Contention 7 is also inadmissible to the extent it raises current safety issues, as these issues are beyond the scope of a license renewal proceeding.[124] As Intervenors appear to recognize, the scope of the license renewal safety review is narrow; it is limited to "plant structures and components that will require an aging management review for the period of extended operation and the plant's systems, structures and components that are subject to an evaluation of time-limited aging analyses."[125] For each structure or component requiring an aging management review, a license renewal applicant must demonstrate that the "effects of aging will be adequately managed so that the intended function(s*)* will be maintained consistent with the [current licensing basis (CLB)] for the period of extended operation."[126]

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[123] *See Prairie Island*, CLI-10-27, 72 NRC at 484; *see also Pacific Gas & Elec. Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 433-435 (2011); *Davis-Besse*, LBP-12-27, 76 NRC at 610-611.

[124] See *Davis-Besse*, LBP-12-27 76 NRC at 609 (citing *Florida Power & Light Co*. (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 8-10 (2001)).

[125] *Duke Energy Corp.*, (McGuire Nuclear Station, Units 1 & 2; Catawba Nuclear Station, Units 1 & 2), CLI-01-20, 54 NRC 211, 212 (2001). *See* Motion to Amend and Supplement Contention 7 at 21.

[126] *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-14, 71 NRC 449, 453-456 (2010).

Challenges to the adequacy of a plant's CLB, however, are beyond the scope of license renewal.[127] The shield building is a design basis issue. Thus, while the shield building provides protection from radiation, that protection is a current operating safety issue covered under daily activities and routine inspections. If the shield building was not operable, then Davis-Besse must shutdown and correct the problem.[128] Therefore, to the extent that Contention 7 seeks to challenge the adequacy of the Commission's safety regulations and the adequacy of Davis-Besse's CLB to provide reasonable assurance of adequate protection of public health and safety,[129] it is beyond the scope of this proceeding and must be rejected.

Despite the Board's rejection of current operating challenges in Contention 5[130] and 6,[131] Intervenors once again raise several current operating issues in support of Contention 7. For example, Intervenors assert that there is an issue of fact as to whether the shield building conforms to its licensing basis.[132] In support of this assertion, Intervenors cite to an e-mail from Timothy Riley,[133] a 2012 NRC inspection report,[134] and their previous Contention 5 filings.[135]

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[127] *See Turkey Point*, CLI-01-17, 54 NRC at 8-9 (stating that the Commission's on-going regulatory oversight ensures the adequacy of the plant's current licensing basis, thus there is no reason to reanalyze the adequacy of the CLB for license renewal).

[128] *See* 10 C.F.R. § 54.30.

[129] The AEA requires the NRC to ensure the safe operation of nuclear power plants. *Union of Concerned Scientists v. NRC*, 824 F.2d 108, 109 (D.C. Cir. 1987). Under Section 182.a of the AEA, the Commission must ensure that "'the utilization or production of special nuclear material will … provide adequate protection to the health and safety of the public.'" *Id*. (quoting 42 U.S.C. § 2232(a)) (alterations in original).

[130] LBP-12-27, 76 NRC at 612 (current licensing basis claims).

[131] Contention 6 Order at 10 (quality assurance claims).

[132] Motion to Amend and Supplement Contention 7 at 7. *See also id*. at 8-9 (pointing to Riley email, the Full Apparent Cause Evaluation, and a 2012 NRC Inspection report for the proposition that the shield building "failed to meet its licensing basis" given the cracking).

[133] Motion to Amend and Supplement Contention 7 at 8.

[134] *Id*. (asserting that the NRC Inspection Report "confirms that the Shield Building cracking meant that the building failed to meet is licensing basis").

Intervenors argue that these documents, in particular several documents filed in support of proposed Contention 5, provide "considerable evidence…concerning departures of the Shield Building from Davis-Besse's [CLB]."[136] Intervenors further assert that this "dispute" over whether Davis-Besse conforms to its CLB raises "a genuine dispute on a material issue of law or fact.[137]

As stated in the Staff's answers to Intervenors' Contention 5 and 6 filings, and the Board's decisions rejecting these contentions, the operation of Davis-Besse from now through April 22, 2017 is a current operating issue, not a license renewal issue. Likewise, the ability of the shield building to perform its intended function is a current licensing issue, not an issue unique to license renewal. Similarly, Intervenors' claims about the structural integrity of the shield building[138] are an out-of-scope current operating issue.

As part of the NRC's ongoing oversight, the Staff inspects FENOC's corrective actions regarding the shield building cracks, concrete void, and rebar issue and evaluates any potential impacts to safety, and existing approvals.[139] The NRC's ongoing oversight of Davis-Besse

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[135] *See* Motion to Amend and Supplement Contention 7 at 8-10 (citing Intervenors' Fifth Motion to Amend and/or Supplement Proposed Contention No. 5 (Shield Building Cracking) (Aug. 16, 2012)).

[136] Motion to Amend and Supplement Contention 7 at 8-10. See id. at 9 (pointing to B/23, B/26, B/1, B/36); id. at 10 (pointing to B/44, B/26). As discussed above, Intervenors point to an email from Abdul Sheikh and mischaracterize it. *See, e.g.*, Motion to Admit Contention 7 at 5 (discussing "internal NRC calculations of two engineers"). As the Staff has indicated, Mr. Sheikh's e-mail did not stand for the proposition suggested by Intervenors. *See* Sheikh Affidavit.

[137] Motion to Amend and Supplement Contention 7 at 24.

[138] *See, e.g.*, Motion to Amend and Supplement Contention 7 at 3 (claiming that FENOC "concedes that significant mistakes were made in remediation [of the concrete]"); Motion to Admit Contention 7 at 5 (citing to NRC Staff emails for proposition that "a minor earthquake or thermal event could cause the collapse of very significant portions of the shield building walls, up to 90%"). Id. at 7-8 (claiming cracking threatens the continued usefulness and stability of the shield building).

[139] The Staff is also considering what impact, if any, this has on a license renewal decision. See, e.g., Staff's April 15, 2014 RAI (ADAMS Accession No. ML14097A454); Staff's Sept. 29, 2014 RAI (ADAMS Accession No. ML14258A285). However, as discussed further below, Intervenors have not raised a genuine material dispute with the LRA because they have not identified how, if at all, the Shield Building Monitoring or Structures Monitoring AMP need to be modified to account for the issues raised in Contention 7.

would address any safety-significant issue arising during the current license period associated with the shield building cracking, concrete void, and rebar issue.[140] Thus, to the extent Intervenors claim that these shield building issues challenge the current operation of the plant, they are outside the scope of the proceeding.[141]

Likewise, challenges to the adequacy of the Staff's review are beyond the scope of a license renewal proceeding.[142] Consequently, Intervenors' claims that the Staff's oversight is inadequate[143] are not subject to litigation in this proceeding. To the extent Intervenors believe there are existing operational issues at Davis-Besse that warrant immediate action, their remedy is to file a § 2.206 petition.[144]

B. Intervenors' Safety Claims Lack Adequate Support, Are Immaterial, and Do Not Raise a Genuine Dispute With the Application

Intervenors' Proposed Contention 7 should also be found inadmissible because its safety claims lack adequate support, are immaterial, and do not raise a genuine dispute with the application. Thus, proposed Contention 7 does not meet the requirements in 10 C.F.R. § 2.309(f)(1).

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[140] *See, e.g.*, 10 C.F.R. § 54.30(a) and (b).

[141] *Turkey Point,* CLI-01-17, 54 NRC at 8-10 (noting that the Commission has a continuing responsibility to oversee the safety and security of ongoing plant operations, and it routinely oversees a broad range of operating issues under its statutory responsibility to assure the protection of public health and safety for operations under existing operating licenses; therefore, for license renewal, the Commission has found it unnecessary to include a review of issues already monitored and reviewed in the ongoing regulatory oversight processes).

[142] *See id*. at 8-10.

[143] See Motion to Admit Contention 7 at 25 (implying that NRC is colluding with FENOC on the shield building issue, with FENOC committing licensing and design basis violations and NRC ignoring those violations). *See also id*. at n.21.

[144] *See Diablo Canyon*, CLI-11-11, 74 NRC at 437.

1. Intended Function Claims Lack Adequate Basis and Do Not Raise a Material Issue

Intervenors assert that the shield building cracking "threatens to fail the Shield Building" from performing its design functions.[145] As discussed above, to the extent this claim is related to current operation, it is outside the scope of this proceeding. To the extent these claims are related to the period of extended operation,[146] they are inadmissible because they lack an adequate basis and fail to raise a material issue.

To renew a license, the Commission must find that there is "reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the CLB."[147] As Intervenors recognize, regarding the shield building, FENOC must demonstrate that the effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the CLB for the period of extended operation.[148] Intervenors assert that FENOC's July 3, 2014 submittal and Full Apparent Cause Evaluation include many facts that "undercut a finding of 'reasonable assurance' that the public health and safety would adequately be protected during the proposed 20-year license extension term."[149]

In support of this assertion, Intervenors re-state Contention 5 and 6 arguments already rejected by the Board and make conclusory assertions that FENOC's July 3, 2014 submittal "admits" that the shield building cracking threatens "the continued usefulness and stability of the structure itself."[150] Aside from these unsupported assertions, Intervenors[151] give no facts, expert

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[145] Motion to Admit Contention 7 at 15.

[146] *See, e.g.*, Motion to Admit Contention 7 at 15 (discussing shield building function "during the 2017 to 2037 license extension period.").

[147] 10 C.F.R. § 54.29.

[148] 10 C.F.R. § 54.29. Motion to Amend and Supplement Contention 7 at 21.

[149] Motion to Amend and Supplement Contention 7 at 4.

[150] Motion to Admit Contention 7 at 8. *See also id*. (claiming that "the burgeoning evidence of increasing cracking [calls] into serious question the basis" for renewing Davis-Besse's license); *id*. at 15

support, or reasons why the propagation of the shield building cracks[152] impact the shield building's ability to perform its intended safety functions.[153] Bare or conclusory assertions, even by an expert, will not suffice to allow the admission of a proffered contention.[154] Thus, Intervenors' claims lack the support needed to trigger an adjudicatory hearing[155] and should be denied.[156]

Intervenors' claims should also be denied because they fail to raise a material issue. As the Board explained in both LBP-12-27[157] and the Contention 6 Order, 10 C.F.R. § 2.309(f)(1) requires that all contentions proffer an issue of law or fact that is material to the outcome of a licensing proceeding, "meaning that the subject matter of the contention must impact the grant or denial of a pending license application."[158] While Intervenors summarize the history of the shield building cracking, re-state their Contention 5 and Contention 6 arguments, and raise concerns with FENOC's July 3, 2014 submittal and the Full Apparent Cause Evaluation,

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(claiming that the "severe, and finally-admitted 'propagation' cracking of the Shield Building threatens to fail the Shield Building from performing its vital design safety and environmental functions.").

[151] "It is the petitioner's obligation to present factual allegations and/or expert opinion necessary to support its contention." Contention 6 Order at 11.

[152] Likewise, Intervenors do not indicate how the cracks identified in October 2011, the cracks identified in August/September 2013, the February 2014 concrete void, or the February 2014 rebar damage impact the shield building's ability to perform its intended safety functions.

[153] In fact, instead of indicating how the cracking has or would prevent the shield building from performing its function, Intervenors point out that "[a]fter the 2011 resealing of the shield building, Davis-Besse operated at full power for over two years." Motion to Admit Contention 7 at 5.

[154] Contention 6 Order at 11 (citing *USEC Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006); *Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003)).

[155] As the Board explained in both LBP-12-27 and the Contention 6 Order, to trigger an adjudicatory hearing "petitioners must be able to "proffer at least some minimal factual and legal foundation in support of their contentions." LBP-12-27, 76 NRC at 595; Contention 6 Order at 10-11.

[156] "[F]ailure to provide [supporting] information regarding a proffered contention requires that the contention be rejected." Contention 6 Order at 11.

[157] LBP-12-27, 76 NRC at 594.

[158] Contention 6 Order at 14.

Intervenors have not indicated how any of their claims or any facts in FENOC's July 3, 2014 submittal or the Full Apparent Cause Evaluation prevent the Staff from making the required license renewal findings. Therefore, Intervenors have not raised a material issue and Contention 7 should be denied.

2. Intervenors' Motions Contain Incorrect and Unsupported Statements That Do Not Raise a Genuine Dispute With the Application or a Material Issue

Intervenors' Motions make several incorrect assertions about FENOC's July 3, 2014 submittal, the Full Apparent Cause Evaluation, and the Shield Building Monitoring AMP. These assertions do not support admission of Contention 7 because they lack an adequate basis, do not raise a genuine dispute with the application,[159] and do not raise a material issue. For example, Intervenors claim that "there has been no consideration nor discussion which addresses the possibility that much less than the drama of the Blizzard [of 1978] might have produced the damage."[160] But FENOC's Root Cause Reports considered whether something other than the Blizzard of 1978 caused the initial laminar cracks identified in October 2011. And the Full Apparent Cause Evaluation includes a discussion of how the cracking propagation was caused by an aging-related mechanism, not the Blizzard of 1978.[161] Thus, these claims are unsupported and do not raise a genuine dispute with the application. Moreover, these claims to do not raise a material issue because Intervenors do not indicate how the root cause of the shield building cracking would impact the Staff's license renewal findings.

Intervenors also incorrectly claim that FENOC's "admission" in its July 3, 2014 submittal that the cracking propagation is aging-related "brings the issue within the scope of this License

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[159] See LBP-12-27, 76 NRC at 595; Contention 6 Order at 12-13 (providing that in order to raise a genuine dispute with the LRA, a contention "must focus on the license application in question, challenging either specific portions of, or alleged omissions from, the application (including the safety analysis report/technical report and the ER) so as to establish that a genuine dispute exists with the applicant on a material issue of law or fact.").

[160] Motion to Amend and Supplement Contention 7 at 13.

[161] Full Apparent Cause Evaluation (discussing icewedging).

Renewal Proceeding."[162] This claim lacks an adequate basis, does not raise a genuine dispute with the application, and does not raise a material issue. The fact that the cracking propagation is aging-related is not what brought the Shield Building Monitoring AMP into the scope of this license renewal proceeding. Both the Staff and the Board have long recognized that FENOC's Shield Building Monitoring AMP and how it accounts for the shield building cracks, regardless of the cracking mechanism, are within the scope of license renewal.

As discussed above, FENOC initially proposed the Shield Building Monitoring AMP in response to a December 27, 2011 Staff RAI following the discovery of shield building cracking in October 2011. In short, the Staff's RAI requested that FENOC (1) provide information on how the recent plant-specific operating experience impacts the shield building's ability to perform its intended functions during the period of extended operation,[163] (2) explain how its existing Structures Monitoring AMP will manage aging of the shield building during the period of extended operation, based on this operating experience,[164] and/or (3) identify and explain any changes to the LRA based on the shield building cracking.[165] Thus, the Staff has long recognized that FENOC's LRA for Davis-Besse must account for how FENOC's AMPs would address the shield building cracking.[166] Likewise, the Board recognized in both LBP-12-27 and the Contention 6 Order that the Shield Building Monitoring AMP was within the scope of the

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[162] Motion to Admit Contention 7 at 12.

[163] RAI B.2.39-13. NRC also requested "a list of any additional aging effects that may require management based on this operating experience." *Id*.

[164] RAI B.2.39-13. *See also id*. (listing items 3.(a)-(d)).

[165] RAI B.2.39-13.

[166] *See* NRC Staff's Answer to Motion to Admit New Contention Regarding the Safety Implications of Newly Discovered Shield Building Cracking (Feb. 6, 2012) (ADAMS Accession No. ML12037A200) (Staff's Answer to Intervenors' Contention 5) (noting that at the time proposed contention 5 was filed, the LRA did not discuss how the shield building cracking would be accounted for; thus, the Staff's position was that a small portion of Intervenors' contention 5 was an admissible safety contention of omission).

proceeding.[167] Therefore, contrary to Intervenors' claims, FENOC's July 3, 2014 submittal is not what "brought" this issue within the scope of license renewal.[168]

Intervenors also incorrectly claim that the Staff previously argued to the Board that Intervenors' Contentions 5 and 6 were not proper for adjudication because the root cause of the initial cracking was not aging-related.[169] This assertion is unsupported, as the Staff made no such argument. Instead, the Staff recognized that a portion of Contention 5 was an admissible safety related contention of omission to the extent it identified FENOC's failure to describe how the Structures Monitoring AMP will account for the shield building cracks during the period of extended operation.[170] The Staff argued that the remainder of Contention 5, as amended and/or supplemented, was inadmissible because it raised issues outside the scope of the proceeding, lacked an adequate basis, and/or failed to raise a genuine material dispute (including challenges to the Shield Building Monitoring AMP). Likewise, the Staff argued that Contention 6 was inadmissible because, among other things, it did not raise a genuine material dispute with the LRA. Thus, it has been and continues to be the Staff's position that how FENOC's AMPs account for the shield building cracking is within the scope of this proceeding.

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[167] *See, e.g.*, LBP-12-27,76 NRC 583, 609-10 (2012) ("First, we agree that although Contention 5 as originally proposed, was (and still is) largely inadmissible for the reasons discussed above, it nonetheless initially contained an admissible contention of omission challenging FENOC's failure to provide a plan to monitor and/or address the shield building cracking in its LRA. We will discuss why the remainder of Contention 5 is inadmissible below. Second, we agree that FENOC's submittal of a Shield Building Monitoring AMP mooted this small admissible portion of Contention 5."). *See also* Contention 6 Order at 12-14 (dismissing Intervenors' AMP challenges because they did not raise a genuine dispute with the LRA).

[168] *See* Motion to Amend and Supplement Contention 7 at 2 ("FENOC's revisions to the AMPs in its Shield Building Monitoring Program, dated July 3, 2014, acknowledge not only the risk, but the reality, of aging-related cracking propagation – that is, worsening – in the already severely cracked Shield Building, an admission which brings the issue within the scope of this License Renewal Application proceeding.").

[169] Motion to Admit Contention 7 at 26 ("Ironically, FENOC, and NRC staff for that matter, have previously argued before this ASLB panel that Intervenors' Shield Building containment cracking-related contentions are not proper for adjudication because of FENOC's determination that the root cause of the cracking. . . is not aging-related.").

[170] See Staff's Answer to Contention 5 at 14-16.

This assertion also fails to raise a genuine material dispute with the application as it does not specifically challenge any portion of the Shield Building Monitoring AMP or indicate a deficiency in the AMP. Since April 5, 2012, the LRA has included the Shield Building Monitoring AMP.[171] As stated in FENOC's July 3, 2014 submittal, "[t]he Shield Building Monitoring Program provides for detection of aging effects prior to the loss of Shield Building intended functions."[172] To litigate the adequacy of this AMP, Intervenors must raise a supported, material, and genuine dispute with the AMP. As discussed below, they have failed to do so.

3. Challenges to the Shield Building Monitoring AMP Are Unsupported and Do Not Raise a Genuine Material Dispute

Intervenors' Proposed Contention 7 states that

> FENOC's proposed modifications to its Shield Building Monitoring Program AMPs, regarding the scope (areas of the Shield Building examined), sample size (number of tests to be performed), and the frequency of its surveillance activities, are woefully inadequate. Significantly more core bores, as well as a broader diversity of complementary testing methods should be required, and at a much greater frequency than FENOC has proposed.[173]

Intervenors also appear to argue that the Structures Monitoring AMP and/or the Shield Building Monitoring AMP are inadequate with respect to dealing with supposed aging-related rebar degradation.[174] For the reasons discussed below, none of Intervenors' AMP challenges are admissible because they are unsupported and do not raise a genuine material dispute.

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[171] L-12-028 at Page 15 of 15 (The stated purpose of the April 5, 2012 version of the Shield Building Monitoring AMP is to "provide reasonable assurance that the existing environmental conditions will not cause aging effects that could result in a loss of component intended function.").

[172] L-14-244 at Page 3 of 8.

[173] Motion to Amend and Supplement Contention 7 at 2.

[174] *See, e.g.*, Motion to Admit Contention 7 at 26-28.

a. Intervenors' AMP Challenges Based on the Root Cause of the Cracking Propagation Do Not Raise a Genuine Dispute or a Material Issue

Intervenors argue that the Shield Building Monitoring AMP is inadequate[175] because FENOC's July 3, 2014 submittal "admitted" that the cracking propagation is aging-related.[176] Intervenors' mechanism-based challenges do not raise a genuine dispute with the LRA or a material issue because Intervenors do not indicate how the root cause of the cracking propagation[177] would impact the Staff's license renewal findings or indicate how the Shield Building Monitoring AMP is deficient.

As discussed above and in Staff's Contention 5 and 6 filings, the Staff's aging management review focuses on "managing the *functionality* of systems, structures, and components [SSCs] in the face of detrimental aging effects as opposed to identification and mitigation of aging mechanisms."[178] As with their previous filings related to the initial shield building cracks[179] and the rebar and concrete void issues,[180] Intervenors Motion to Admit Contention 7 does not explain why knowledge of the cracking propagation mechanism is necessary for developing an adequate AMP based on monitoring the cracks through multiple inspections over the period of extended operation. Thus, Intervenors do not raise a material

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[175] *See, e.g.,* Motion to Admit Contention 7 at 12 ("In light of the revelation in August-September, 2013 of previously undetected cracks and the conclusion that they were worsening (propagating), Intervenors challenge the adequacy of FENOC's Shield Building Monitoring Program AMPs."). *See also* Motion to Amend and Supplement Contention 7 at 18-20.

[176] Motion to Amend and Supplement Contention 7 at 2. *Id.* at 18 ("The FACE evaluation provided as Enclosure 2 to FENOC's July 3 RAI letter verifies to a degree of scientific certainty, aging-related cracking is spreading through the Shield Building walls…").

[177] The root cause of the initial cracks and of the concrete void and rebar issue were not changed by FENOC's July 3, 2014 submittal or the Full Apparent Cause Evaluation.

[178] Nuclear Power Plant License Renewal; Revisions, 60 Fed. Reg. 22,461, 22,488 (May 8, 1995) (emphasis added).

[179] *See* filings related to Contention 5, as amended and/or supplemented; *See* LBP-12-27 (rejecting Contention 5, as amended and/or supplemented).

[180] *See* Motion to Admit Contention 6; See Contention 6 Order (rejecting Contention 6).

issue because they do not indicate how their claims would prevent the Staff from making its license renewal findings or why the AMP is deficient.

Intervenors' mechanism-based claims also do not raise a genuine dispute with the application because the root cause of the cracking propagation is irrelevant to the stated purpose of the Shield Building Monitoring AMP. As noted above, the purpose of the Shield Building Monitoring AMP is to provide for detection of aging effects prior to the loss of shield building intended functions.[181] Thus, the Shield Building Monitoring AMP will inspect the core bores for discernible change in previously identified cracks or indication of new cracking[182] and will provide "for detection of aging effects prior to the loss of Shield Building intended functions."[183] In achieving this purpose, the AMP will periodically inspect the shield building to confirm that there are "no discernable change[s] in crack width or [confirm] that no visible cracks have developed in core bores that previously had no visible cracks."[184]

Notably, the Shield Building Monitoring AMP provides that the "parameters to be inspected will include visual evidence of surface degradation, such as cracking, change in material properties, loss of material and corrosion."[185] In addition, other AMPs, including the Structures Monitoring AMP, are tailored to address other cracking and aging-effects. Intervenors do not indicate what specifically is wrong with FENOC's analysis or approach to the relevant issue. Thus, Intervenors do not raise a genuine dispute with the LRA.

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[181] L-14-244 at Page 3 of 8. As noted above, this stated purpose is similar to the stated purpose of the April 5, 2012 version of the Shield Building Monitoring AMP. *See, e.g.* L-12-028 at Page 15 of 15.

[182] Intervenors appeared to recognize this in their Contention 5 pleadings, which they incorporated into their Motion to Admit Contention 7. For example, Intervenors' Third Motion to Amend and/or Supplement Proposed Contention 5 (July 16, 2012) (ADAMS Accession No. ML12198A561) noted at page 2 that the AMP's purpose is to "to oversee and deal with the shield building's…cracking."

[183] L-14-224 at Page 3 of 8.

[184] L-14-224 at Page 4 of 8. Notably, this is similar to the language in the April 5, 2012 version of the AMP. *See* L-12-028 at Page 6 of 8.

[185] *See* L-12-418 at Page 6 of 11. See also id. ("Observed conditions may indicate a need to conduct augmented inspections.").

b. Intervenors' Challenges About the Scope of the AMP and the Number of Core Bores Are Unsupported and Do Not Raise a Genuine Dispute

Contention 7 states that FENOC's July 3, 2014 modifications to the Shield Building Monitoring AMP are "woefully inadequate" given the AMP's scope (i.e., the areas of the Shield Building to be examined).[186] Intervenors note that "[v]ast areas of the Shield Building surface area, and volume, would fall outside of FENOC's Monitoring Program AMPs, as currently construed, in light of the meager sampling program proposed."[187] Intervenors argue that the number of core bores inspected (i.e., tests to be performed)[188] should be "significantly expanded."[189]

The Shield Building Monitoring AMP provides for visual inspections; specifically, "a baseline inspection, followed by periodic inspections."[190] Previously, the representative sample size included 20 core bore inspection locations in the Shield Building Wall. FENOC's July 3, 2014 submittal revised the sample size to a minimum of 23 and the Shield Building Monitoring AMP now provides that:

> The representative sample size includes a minimum of 23 core bore inspection locations in the Shield Building Wall subcomponent population having the same material, environment, and aging effect combination. A minimum of 10 of the core bores at inspection locations are currently uncracked; however, they are adjacent to areas of known cracking. This strategic location, and selection of core bores provides FENOC with the ability to monitor for crack propagation. The 23 core bore location distribution has been chosen to include core bore inspections in 8 of the 10 flute shoulders with a high prevalence of event-driven

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[186] *See* Motion to Amend and Supplement Contention 7 at 2. *See also* Motion to Admit Contention 7 at 17.

[187] *See* Motion to Amend and Supplement Contention 7 at 20. Motion to Admit Contention 7 at 21 (claiming that "past evidence" is inadequate to choose "future inspection locations" because it could "easily miss unknown cracking across stretches of the Shield Building.").

[188] *See* Motion to Amend and Supplement Contention 7 at 2.

[189] *Id*. at 20.

[190] L-14-224 at Page 4 of 8.

> laminar cracking[191]…In addition, past evidence of crack propagation will be considered in choosing inspection locations.[192]

Intervenors assert that 23 core bores is a "meager" number and should be "significantly increased"[193] and that the sampling should be "from a more dispersed set of locations on the Shield Building exterior."[194] But Intervenors offer only conclusory assertions that this number of core bores is inadequate. Intervenors do not specify, with expert or other factual support, why this number of core bores is inadequate or what number of core bores would be adequate. Likewise, Intervenors do not offer any support for why the locations chosen[195] are inadequate or why FENOC was "arbitrary" for only examining 8 of the 10 flute shoulders.[196]

Intervenors also assert, without support, that using past evidence of crack propagation to choose future inspection locations is "unacceptably vague" and also "not acceptable in terms of reasonable assurance of adequate protection of public health, safety, and [the] environment over the proposed 2017-2037 license extension."[197] As the Board has explained, it is not enough to point to an AMP and claim that it is deficient. Instead, Intervenors must indicate with

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[191] The AMP also notes that this distribution "also covers shell sections above elevation 780 feet with 4 core bores (2 pairs), and each Main Steam Line penetration area with one core bore." L-14-224 at Page 5 of 8.

[192] L-14-224 at Page 4-5 of 8. The AMP further provides that "Inspection findings will be documented and evaluated by assigned engineering personnel such that the results can be trended. Inspection findings that do not meet acceptance criteria will be evaluated and tracked using the FENOC Corrective Action Program." *Id*. at Page 5 of 8.

[193] Motion to Admit Contention 7 at 13.

[194] Motion to Amend and Supplement Contention 7 at 24.

[195] *See* SER (describing FENOC's rationale for selection of core bores).

[196] *See* Motion to Admit Contention 7 at 21 ("FENOC has arbitrarily excluded large sections of the Shield Building from further examination under its proposed AMPs, such as two of the ten flute shoulders.").

[197] Motion to Admit Contention 7 at 22.

specificity what is wrong with the analysis.[198] Intervenors have not done so here; thus, this challenge should not be admitted.[199]

c. Intervenors' Testing Frequency Challenges Are Unsupported and Fail to Raise a Genuine Material Dispute

Intervenors assert that the frequency of the Shield Building Monitoring AMP's surveillance activities is "woefully inadequate."[200] FENOC's July 3, 2014 submittal amended the Shield Building Monitoring AMP such that "[t]he frequency of internal visual inspection for the 23 monitoring bores is changed to annual inspections for a minimum of 4 years starting in 2015."[201] Notably, these annual inspections would continue if aging effects are identified[202] by the one-year interval visual inspections. Annual inspections would only stop "following acceptable results of the one-year interval inspections, [then] the interval will be changed to a two-year interval in 2019 and a maximum four-year interval after the 2026 inspections."[203]

Intervenors claim that "FENOC's testing frequency is inadequate, and risks becoming less adequate over time (via relaxed, less frequent testing)."[204] Intervenors state that "[a]nnual inspections, at a minimum should be required, not two- or even four-year inspection cycles, as

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[198] See Contention 6 Order at 13-15 (discussing a properly formulated challenge to an AMP that could show a genuine material dispute).

[199] In fact, at one point, Intervenors appear to indicate that the AMP, as revised, meets the minimum requirements. See Motion to Admit Contention 7 at 25.

[200] Motion to Amend and Supplement Contention 7 at 2.

[201] L-14-224 at Page 3 of 4.

[202] L-14-224 at Page 4 of 8. No aging effects is defined as "no discernable change in crack width or the confirmation that no visible cracks have developed in core bores that previously had no visible cracks."

[203] L-14-224 at Page 3 of 4. Further, the July 3, 2014 submittal provided that "[s]hould there be an identified change to the cause of the condition, significant change to the rate of crack growth, or a condition adverse to the bounding nature of the design basis documentation, modifications to the Shield building Monitoring Program will be determined using the FENOC Corrective Action Program." *Id. See also* Motion to Admit Contention 7 at 18 (quoting the revised frequency intervals from the Shield Building Monitoring AMP).

[204] Motion to Admit Contention 7 at 12-13. *See also id*. at 22 (claiming that it is "troublesome" that FENOC set "huge time intervals between investigatory inspections").

FENOC has proposed."[205] But as noted, and as the Intervenors themselves point out, the July 3, 2014 revisions to the Shield Building Monitoring AMP provide for annual monitoring and inspections through at least 2018.[206] Further, Intervenors note that it was an annual inspection that detected the "August-September 2013 new cracking and crack propagation."[207] Because the LRA provides for what the contention claims is lacking (annual inspections to identify aging effects), Intervenors have not raised a genuine dispute with the application.

Likewise, Intervenors have not raised a supported or material dispute with the two-year interval frequency through 2026 or the maximum four-year interval frequency after 2026. Intervenors claim that it is "unacceptable for FENOC to relax inspections to less than annually"[208] and that two or four-year testing intervals would be "largely meaningless."[209] But Intervenors offer no support for these conclusory claims. FENOC's July 3, 2014 submittal noted that the "four-year inspection interval is more stringent than the guidance in American Concrete Institute (ACI) Report ACI 349.3R, 'Evaluation of Existing Nuclear Safety-Related Concrete Structures' Chapter 5, Section 5.3 and Chapter 6 for monitoring of a structural condition that has been discovered, evaluated and analyzed; which is a five-year interval."[210] Intervenors offer nothing to refute this, or indicate why the intervals are inadequate. Simply pointing to a change in the AMP and claiming it is deficient is not enough to render a claim admissible. Instead, a

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[205] Id. at13.

[206] L-14-224 at Page 3 of 4; Motion to Amend and Supplement Contention 7 at 11.

[207] Motion to Admit Contention 7 at 22.

[208] *Id*.

[209] *Id*. ("FENOC's weak commitment to document and evaluate evidence of degradation of the Shield Building through the company's Correct Action Program and to 'include a determination of the need for any required change to the inspection schedule or parameters that need to be inspected,' is largely meaningless with two or four-year testing intervals.").

[210] L-14-224 at Attachment Page 3 of 4.

petitioner must provide some support for its claims and indicate what specifically is wrong with the analysis.[211] Thus, these challenges are inadmissible.

d. Intervenors' Testing Diversity Challenges Are Unsupported and Fail To Raise a Genuine Dispute or a Material Issue

Intervenors assert that the Shield Building Monitoring AMP should be required to include "a broader diversity of complementary testing methods."[212] Intervenors argue that such complimentary testing methods would "compensate for the limitations of FENOC's small number of proposed core bore tests."[213] As discussed, the Shield Building Monitoring AMP provides for periodic visual inspections of core bores.[214] These inspections "will be performed in accordance with an implementing procedure by inspectors qualified as described in Chapter 7 of ACI Report 349.3R."[215]

As an initial matter, and as discussed above, Intervenors do not provide support for their assertion that the number of core bores is inadequate. Moreover, Intervenors do not provide any support for why the AMP's existing testing method is deficient. Instead, Intervenors only claim, without support, that other testing methods "can and should include" electronic testing, impact response mapping or impulse response testing, creep testing, pull tests, ultrasonic testing, lab testing, strength tests, and tensile tests.[216] As discussed above, it is not enough to

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[211] Contention 6 Order 10-11 (basis) and *id*. at 15 (materiality).

[212] Motion to Amend and Supplement Contention 7 at 2.

[213] Motion to Admit Contention 7 at 19. *See also id*. ("Intervenors call for additional testing methods, besides core bores, to be invoked.").

[214] The Shield Building Monitoring AMP also contains provisions for installing new core bores, as required, to identify changes in the limits of cracking. For example, based on the operating experience of finding an observed crack in one of the 12 core bores initially inspected in 2013, the inspection population was increased, eventually leading to inspection of all available core bores (80 in total). L-14-224 at Page 7 of 8 and Full Apparent Cause Evaluation at 13 of 80.

[215] Motion to Admit Contention 7 at 17 (quoting from L-14-224 at Page 3- 4 and 6-7 of 8 of FENOC's July 3, 2014 submittal)).

[216] Motion to Admit Contention 7 at 19.

claim that an AMP is deficient; Intervenors must offer some support for their claims and point to what specifically is wrong with the analysis. Intervenors do not indicate why the testing methods in the existing AMP are inadequate. Thus, Intervenors' assertions lack sufficient basis.

Moreover, Intervenors do not indicate how the other suggested testing methods would serve the purpose of the AMP. Instead, Intervenors simply list other testing methods and state that they should be required "to provide a comprehensive understanding of the status of the Shield Building, and to guarantee its capability to perform its design functions."[217] These assertions fail to raise a genuine material dispute with the application.

e. Intervenors' Anticipatory AMP Challenges Do Not Raise a Genuine Dispute With the Application

Intervenors also challenge the adequacy of hypothetical AMPs, namely the Shield Building Monitoring AMP and/or Structures Monitoring AMP with some uncertain "anticipated modifications."[218] Specifically, Intervenors state that they seek "to litigate the adequacy of FENOC's anticipated modifications to Davis-Besse's Shield Building Monitoring Program and the Structures Monitoring Program [AMPs] in light of [FENOC's] dramatic change of position, wherein the company admits the aging-related nature of the cracking phenomena – a position advocated by Intervenors since the cracks were first publicized by the company in 2011."[219]

As the Board explained in dismissing similar anticipatory challenges raised in Intervenors' Contention 6, these types of anticipatory challenges are premature and do not raise

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[217] Motion to Admit Contention 7 at 19-20.

[218] *Id*. at 2.

[219] *Id*. As discussed, Intervenors are incorrect to the extent they assert that FENOC's July 3, 2014 submittal "admitted" the 2011 cracks or rebar damage was aging-related. FENOC's July 3, 2014 submittal only stated that the cracking *propagation*, not the initial 2011 cracks, is aging-related. Moreover, FENOC's July 3, 2014 RAI Response maintains the position that the root cause of the 2011 cracks and the rebar damage are not aging-related. *See* L-14-224 at Page 6 of 8 (discussing 2011 cracks) and *id*. at Page 3 and 4 of 8 (discussing rebar).

a material issue.[220] Thus, Intervenors' anticipatory AMP challenges should be denied as premature and for failing to raise a material issue or genuine dispute with the application.

f. Intervenors' Claims Related to Broken or Cracked Rebar Lack Adequate Support and Fail to Raise a Genuine Dispute With the Application

Finally, Intervenors challenge FENOC's plans to manage "age-related degradation of rebar."[221] Intervenors appear to claim that the LRA is inadequate because it provides only for visual inspection of concrete, instead of "any measurement technique."[222] But Intervenors offer only conclusory assertions; therefore, these claims lack adequate support and are inadmissible. Moreover, these claims do not raise a genuine dispute with the application. Intervenors appear to challenge the Shield Building Monitoring AMP's approach to managing any aging-related degradation in the rebar.[223] But it is the Structures Monitoring AMP that provides for the aging-management of the rebar.[224] Intervenors do not mention, much less raise a genuine dispute with, this AMP. Moreover, Intervenors provide no support for why a "measurement technique" must be employed or why the analysis supporting the AMP is deficient.[225] Therefore, Intervenors do not raise a material issue.

For all the reasons outlined above, these portions of Proposed Contention 7 are inadmissible.

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[220] Contention 6 Order at 16 (holding that anticipatory AMP challenges were premature and failed to meet the requirements of 10 C.F.R. § 2.309(f)(1)(iv)).

[221] Motion to Admit Contention 7 at 26-27.

[222] *Id*. at 27.

[223] "FENOC's Shield Building Monitoring Program modifications concerning age-related degradation of rebar…relates to the need for reconsideration of the news that the Shield Building cracking is aging-related." Motion to Admit Contention 7 at 26-27.

[224] See Staff's SER at 3-516 (noting that the aging effect/mechanism of loss of material (spalling, scaling) and cracking due to freeze-thaw for the component group that includes the shield building is covered by the Structures Monitoring Program).

[225] As discussed above, to the extent the rebar claims raise current operating issues, see Motion to Admit Contention 7 at 27-28, they are outside the scope of this proceeding.

C. Intervenors' Environmental Claims Lack an Adequate Basis, Are Immaterial, and Do Not Raise a Genuine Dispute With the Application

Intervenors' proposed Contention 7 also raises challenges related to the Staff's DSEIS, particularly the SAMA analysis and the alternatives analysis.[226] For the reasons discussed below, Intervenors' environmental claims are inadmissible because they lack an adequate basis, are immaterial, and fail to raise a genuine dispute with the application.

1. Intervenors' Claims That the FSEIS Must Consider the Environmental Impacts of the Shield Building Cracking Propagation Lack Adequate Support

Contention 7 states that the shield building "cracking phenomena[227] must be identified, analyzed and addressed within the Final Supplemental Environmental Impact Statement."[228] Intervenors assert that the "severe, and finally-admitted increased cracking of the Shield Building threatens to fail the Shield Building from performing its vital…environmental functions."[229]

As with Intervenors' similar challenges in Contentions 5 and 6, this challenge is fatally vague and unsupported by any basis. As Intervenors recognize, the Staff's environmental review for license renewal is focused on the potential impacts of twenty additional years of operation.[230] Intervenors point to nothing that is missing in the Staff's analysis nor do they assert any specific environmental impact has been omitted or inadequately analyzed. Further,

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[226] Motion to Amend and Supplement Contention 7 at 2.

[227] Given the statement of Contention 7 and its focus on the cracking propagation, the Staff reads "phenomena" to be the cracking propagation. However, to the extent Intervenors assert that the "phenomena" includes the 2011 cracks, the concrete void, and/or the rebar damage, Intervenors' claims also lack adequate support.

[228] Motion to Amend and Supplement Contention 7 at 2. *Id.* at 19. *See also* Motion to Admit Contention 7 at 12.

[229] Motion to Amend and Supplement Contention 7 at 23.

[230] *Turkey Point*, CLI-01-17, 54 NRC at 11-12. Motion to Amend and Supplement Contention 7 at 22-23. Thus, contentions raising environmental issues in a license renewal proceeding are limited to those issues which are affected by license renewal and have not been addressed by rulemaking or on a generic basis.

Intervenors have provided no support through qualified experts of any missing or improperly analyzed impact. As such, this portion of the contention fails because it lacks sufficient specificity to support admission.

Second, Intervenors have failed to tie any shield building "phenomena" to any specific environmental impact. The Commission has made clear that complex connections not obvious on their face must be supported by qualified experts.[231] Here, Intervenors have proffered no expert, let alone an expert opinion sufficient to tie any of the shield building "phenomena" (i.e., the initial cracks, the concrete void, the rebar damage and/or the cracking propagation) to an environmental impact.

2. Intervenors' Assertions Regarding the SAMA Analysis Are Unsupported and Do Not Raise a Material Issue

Contention 7 states that the "cracking phenomena must be identified, analyzed and addressed" in the SAMA analysis.[232] Intervenors claim that "[s]ince the cracking is clearly site-specific, NEPA requires SAMAs as a Category 2, site-specific, consideration."[233] Further, Intervenors assert that NEPA "requires a realistic [SAMA] analysis which includes among its assumptions a flawed Shield Building which may not meet its [CLB]".[234] Therefore, Intervenors "move for inclusion of appropriate severe accident mitigation candidates in the Supplemental Environmental Impact Statement being prepared by the NRC Staff for this License Renewal proceeding."[235]

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[231] *See*, e.*g., Nuclear Mgmt. Co., LLC* (Palisades Nuclear Plant), LBP-06-10, 63 NRC 314, 352 (2006), *aff'd*, CLI-06-17, 63 NRC 727 (2006).

[232] Motion to Amend and Supplement Contention 7 at 2. *See also id.* at 19.

[233] *Id*. at 21.

[234] *Id*. at 23.

[235] Motion to Admit Contention 7 at 1.

Notably, Contention 7's SAMA claims are very similar to the SAMA claims raised, and rejected, in Contentions 5 and 6.[236] Likewise, Intervenors' Contention 7 SAMA claims should be rejected for lacking adequate support and failing to raise a material issue. For example, Intervenors assert that the SAMA analysis must account for the shield building "cracking phenomena" because the cracking is unique to Davis-Besse and SAMA is a Category 2 issue. While the Staff recognizes that SAMA is a Category 2 issue in this proceeding, the ER and the Staff's DSEIS contains a SAMA analysis; Intervenors do not indicate why this SAMA analysis is deficient or must include a discussion of the "cracking phenomena." Instead, Intervenors only claim that the SAMA candidates are inappropriate, and "move for inclusion of appropriate severe accident mitigation candidates in the [SEIS]."[237]

As with their Contention 5 and 6 SAMA claims, Intervenors leave it to the Board and the other parties to determine what exactly Intervenors take issue with regarding the SAMA analysis. Intervenors point to no change in the SAMA analysis conclusions that would be materially changed by addressing their speculative assertions. It is not for the Board and the parties to create a contention.[238]

Moreover, an admissible contention must raise a material issue affecting the license renewal decision. Intervenors fail to identify a specific material issue. With respect to SAMAs, the Commission has stressed that the "ultimate concern" for a SAMA analysis "is whether any additional SAMA should have been identified as potentially cost-beneficial, not whether further

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[236] See *Davis-Besse*, LBP-11-13, 73 NRC 534, 555-568; LBP-12-27, 76 NRC 583 (rejecting Intervenors' claims that FENOC's SAMA analysis is inadequate because it did not account for the shield building cracks identified in October 2011); See Contention 6 Order (rejecting Intervenors' claims that the SAMA analysis is inadequate).

[237] Motion to Admit Contention 7 at 1.

[238] *Metropolitan Edison Co*. (Three Mile Island Nuclear Station, Unit 1), CLI-83-25, 18 NRC 327, 331 (1983).

analysis may refine the details in the SAMA NEPA analysis."[239] "Unless it looks genuinely plausible that inclusion of an additional factor or use of other assumptions or models may change the cost-benefit conclusions for the SAMA candidates evaluated, no purpose would be served to further refine the SAMA analysis, whose goal is only to determine what safety enhancements are cost-effective to implement."[240]

Intervenors only make conclusory assertions that the SAMA candidates are not appropriate and that the analysis is not "realistic" because the SAMA does not "include among its assumptions a flawed Shield Building which may not meet its [CLB]."[241] But Intervenors do not indicate how any "flaw" in the shield building would affect the likelihood of core damage frequency or a large early release frequency. Intervenors are also silent as to how the "cracking phenomena" might alter the cost-benefit analysis or identify a new potentially cost beneficial mitigation measure. Therefore, Intervenors do not raise a genuine material dispute.

Instead, Intervenors' claims demonstrate a misunderstanding of the purpose of the shield building and its intended function. The protection the shield building provides as a biological shield against radiation is a current operating safety issue. If the shield building was not operable, then the plant must shutdown and correct the problem to operate. *See* 10 C.F.R. § 54.30. Structural cracks, concrete voids, or rebar damage that do not impair the safety function of the shield building would not impact the SAMA analysis in any way.[242] The shield building is not credited for mitigating a release in a severe accident and the SAMA analysis

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[239] *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-09-11, 69 NRC 529, 533 (2009).

[240] *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc. (*Pilgrim Nuclear Station), CLI-10-11, 71 NRC 287, 317 (2010).

[241] Motion to Amend and Supplement Contention 7 at 23.

[242] *See* NUREG/CR-2300, Vol. 1, *PRA Procedures Guide, A Guide to the Performance of Probabilistic Risk Assessments for Nuclear Power Plants* (Jan. 1983), *available at*: . http://www.nrc.gov/reading-rm/doc-collections/nuregs/contract/cr2300/vol1/.

does not model the shield building. However, a SAMA analysis does assume that there will be containment failures and bypasses. Intervenors point to nothing that would indicate that FENOC's SAMA or the Staff's DSEIS is unreasonable.

Thus, this portion of proposed Contention 7 should be dismissed for lacking an adequate basis,[243] and failing to raise a genuine material dispute.[244]

3. Intervenors Claims about the Alternatives Analysis Lack Adequate Support and Do Not Raise a Genuine Dispute with the Application

Intervenors also claim that the alternatives discussion in the DSEIS is inadequate. Intervenors state that:

> Respecting the compromised Shield Building, "reasonable consideration of alternatives" should mean that an accurate economic costing of the replacement of the Shield Building should be included in the NEPA analysis, along with other remedial steps, such as replacement of portions of the reinforced concrete walls.[245]

Intervenors' alternatives claim should be rejected as it lacks an adequate basis and fails to raise a genuine material dispute with the application. The Staff's DSEIS contains a discussion of reasonable alternatives.[246] As part of that discussion, the Staff examined the potential environmental impacts of alternatives to license renewal for Davis-Besse, and where applicable, considered alternatives that may reduce or avoid adverse environmental impacts from the proposed license renewal.[247]

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[243] The Commission "is unwilling to throw open its hearing doors to petitioners who have done little in the way of research or analysis, provide no expert opinion, and rest merely on unsupported conclusions." *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-17, 56 NRC 1, 12 (2002).

[244] *See Philadelphia Elec. Co.* (Peach Bottom Atomic Power Station, Units 2 and 3) ALAB-216, 8 AEC 13, 20 (1974) (finding contention inadmissible because it did not give parties to this proceeding sufficient notice of the issues sought to be litigated).

[245] Motion to Amend and Supplement Contention 7 at 22.

[246] *See* Chapter 8.the DSEIS, available at: http://pbadupws.nrc.gov/docs/ML1405/ML14050A290.pdf.

[247] DSEIS at 8-1.

As Intervenors recognize, "[r]easonable alternatives for license renewal proceedings are limited to discrete options that are feasible technically and available commercially, as well as the GEIS requirement that the 'no-action' alternative address energy conservation."[248] The DSEIS's alternatives discussion addresses the no action alternative, and considers license renewal of LGS, and several other baseload generating alternatives to be reasonable alternatives to license renewal of LGS.[249] Intervenors do not indicate why the DSEIS's discussion of alternatives is unreasonable or how it "craft[ed] a set of alternatives so narrowly as to render it a foregone conclusion that the proposed action will be deemed superior."[250] Instead, Intervenors suggest that the shield building is "compromised" such that it cannot perform its intended functions. As discussed above, this is a current operating issue not within the scope of license renewal.

Intervenors also assert that the Staff's SEIS must include a discussion of "other remedial steps, such as replacement of portions of the reinforced concrete walls" of the shield building.[251] Intervenors' refurbishment claims lack an adequate basis and fail to raise a genuine material dispute. Chapter 3 of the DSEIS discusses refurbishment activities. As discussed in Chapter 3, refurbishment activities are done under the current license. FENOC's ER and the Staff's DSEIS indicated that refurbishment activities at Davis-Besse included vessel head replacement and steam generator replacement; no repairs or refurbishment is currently contemplated for the shield building. Intervenors do not indicate why refurbishment of the shield building is needed or how any refurbishment activity associated with the shield building relates to an environmental

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[248] Motion to Amend and Supplement Contention 7 at 22 (citing *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 & 3), LBP-08-13, 68 NRC 43, 205 (2008)).

[249] See DSEIS Chapter 8 (discussing several alternatives evaluated in-depth and other alternatives considered).

[250] Motion to Amend and Supplement Contention 7 at 22 (citing *Exelon Generation Co.* (Early Site Permit for Clinton ESP Site), LBP-05-19, 62 NRC 134, 158 n.77 (2005)).

[251] Motion to Amend and Supplement Contention 7 at 22.

impact or to the Staff's alternatives analysis. Thus, Intervenors' alternatives claim lacks an adequate basis and fail to raise a genuine material dispute with the application.

III. Intervenors' Motion to Admit Contention 7 Should Be Denied As an Untimely Request for Reconsideration of LBP-12-27 and the Contention 6 Order to the Extent It Attempts to Relitigate Contention 5 and 6, Respectively

The Staff recognizes that Intervenors' Motion to Admit Contention 7 is not labeled as a motion for reconsideration and does not explicitly request reconsideration of either LBP-12-27 or the Contention 6 Order. However, Intervenors' Motion to Admit Contention 7 appears to challenge the Board's rulings on both Contentions 5 and 6 and incorporates or re-raises arguments rejected in LBP-12-27 and the Board's Contention 6 Order.

For example, Intervenors' Motion to Admit Contention 7 incorporates the filings and exhibits associated with Intervenors' Motion to Admit Contention 5 and Intervenors' five motions to amend and/or supplement Contention 5.[252] Intervenors then cite to arguments made in their Contention 5 pleadings[253] as support for Contention 7, stating that they have maintained throughout this proceeding that the "cracking-phenomenon" is "aging-related."[254] Intervenors

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[252] Motion to Admit Contention 7 at 3. *See id.* ("Intervenors documented concerns that the proliferation of different types of cracks may have commenced in the 1970's before the plant had even opened, and that their spreading and frequency of occurrence may be increasing with the passage of time.").

[253] *See, e.g.*, Motion to Admit Contention 7 at 10-12; *id.* at 21 (discussing dome parapet claims raised in Intervenors' Third Motion to Amend/Supplement Contention 5); *id.* at 24 ("Intervenors have previously argued before the ASLB panel in this proceeding that there are multiple kinds of cracking, located at diverse places across the huge Shield Building…including sub-surface laminar cracking, surface cracking, dome cracking, micro-cracking, and radial cracking."); *id.* at 29 ("Now that even FENOC acknowledges what Intervenors have argued since January 2012 before this very ASLB panel – that the cracking is aging-related, and subject to worsening – Intervenors urge the ASLB panel to grant a hearing on their contention…"); *id.* at 30-31 (discussing PII's revised root cause report and arguments made in Intervenors' Fourth Motion to Amend and Supplement Contention 5).

[254] Motion to Admit Contention 7 at 2. See *also id.* (stating that FENOC may be incapable of managing Davis-Besse safely and successfully through the proposed license extension period of 2017-2037).

claim that their Contention 5 claims were "flatly rejected,"[255] and imply that FENOC's July 3, 2014 submittal confirms that their Contention 5 and 6 claims should have been admitted.[256]

Additionally, Intervenors appear to claim that because FENOC's July 3, 2014 submittal "admits" that the cracking propagation is aging related, that the Board was incorrect in finding that Intervenors' Contention 5 and 6 were based, in large part, on pure speculation.[257] Intervenors also imply that the microcracking arguments raised in their Third Motion to amend foretold of the potential significance of the cracks identified in August/September 2013 and of the cracking propagation discussed in FENOC's July 3, 2014 submittal.[258]

Intervenors also re-raise Contention 6 arguments, which were rejected in the Contention 6 Order. For example, Intervenors discuss the rebar and concrete issues identified in February 2014 that were the subject of Contention 6 and state that they "sought then, and seek now, to litigate the adequacy of FENOC's anticipated modifications to Davis-Besse's Shield Building Monitoring Program and the Structures Monitoring Program Aging Management Plans."[259] Further, Intervenors site the Staff's April 15, 2014 RAI and claim that the RAI contains an "admission" from the Staff that "when the shield building was sealed shut following reactor head replacement in 2011, a stretch of the shield building wall which was 26-rebar-sections in length

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[255] *See, e.g.*, Motion to Admit Contention 7 at 3.

[256] *Id*. at 2 ("Intervenors argue, in support of their proposed Contention 6 in April 2014, that FENOC may be incapable of managing Davis-Besse safely and successfully through the proposed license extension period of 2017-2037 because of the repeated problems with voids in the concrete, and a seemingly open-ended problem with the spreading of laminar and other cracks throughout the Shield Building.").

[257] *See e.g.*, Motion to Admit Contention 7 at 5 (noting that the Board "castigated Intervenors for 'speculating' about the incipient and growing problem of cracking of the Shield Building"). *Id*. ("But alas, history has caught up with Davis-Besse. After Contention 5 was unceremoniously dismissed, FENOC acknowledged in September 2013…that there is worsening shield building cracking.").

[258] See e.g., Motion to Admit Contention 7 at 24.

[259] Motion to Admit Contention 7 at 2.

was not anchored to the rest of the rebar skeleton."[260] Intervenors then restate their Contention 6 claims that "[w]hile the information on the concrete voids is sparse and a bit unclear so far, it is legitimate to wonder if there is any relationship between the void…and the cracked and broken rebar…"[261]

The Board should reject Contention 7 to the extent it relies on arguments made and rejected in LBP-12-27 and the Contention 6 Order. Intervenors did not seek review of either LBP-12-27 or the Contention 6 Order[262] or file a timely motion for reconsideration.[263] Thus, while Intervenors may disagree with those rulings, Intervenors' delay in seeking review of the Board's decisions on Contentions 5 and 6 makes the Board's decision final with respect to any issues shared between the rejected Contentions 5 and 6 and proposed Contention 7.

The Board considered each of Intervenors' motions related to Contention 5 and 6, provided an analysis under the applicable contention admissibility standards and license renewal framework, and held that both Contention 5, as amended or supplemented, and Contention 6 were inadmissible.[264] An attempt to seek review or reconsideration of these rulings now, through arguments made in support of Contention 7, is improper,[265] untimely,[266] and should be rejected by the Board.

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[260] Motion to Admit Contention 7 at 4.

[261] Motion to Admit Contention 7 at 5. See Motion to Admit Contention 6 at 7 (making same assertion).

[262] *See, e.g.*, 10 C.F.R. § 2.311; 10 C.F.R. § 2.341.

[263] See 10 C.F.R. § 2.323(e) ("A motion [for reconsideration] must be filed within ten (10) days of the action for which reconsideration is requested. The motion and any responses to the motion are limited to ten (10) pages."). Intervenors could have filed a timely motion for reconsideration of LBP-12-27 on or before January 6, 2013. Intervenors could have filed a timely motion for reconsideration of the Board's Contention 6 Order on or before August 4, 2014.

[264] *See generally*, *Davis Besse*, LBP-12-27, 76 NRC 583 (2012); Contention 6 Order.

[265] *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), LBP-91-39, 34 NRC 273, 279-280 (1991) (providing that allegations that a Board decision is erroneous are not a proper subject of contentions).

In any event, Intervenors have not met the Commission's reconsideration standards. Thus, to the extent Intervenors' instant motion could be viewed as an untimely request for reconsideration, there is no basis for granting such relief.[267] The regulations state that "[m]otions for reconsideration may not be filed except upon leave of the presiding officer or the Commission, upon a showing of compelling circumstances, such as the existence of a clear and material error in a decision, which could not have reasonably been anticipated, that renders the decision invalid."[268] In sum, it is not sufficient for a movant to point to facts that were not considered by the Board in its decision; rather, those facts must establish "a clear and material error" by the Board that "renders the decision invalid."[269] Moreover, where the facts presented by the motion were not in evidence and thus could not have been considered by the Board in its decision, they may not be relied upon as a basis for "reconsider[ing]" the decision that was rendered.[270]

Intervenors have not pointed to any fact(s) not considered by the Board that establishes a clear and material error that renders LBP-12-27 or the Contention 6 Order invalid. Instead, Intervenors either reference the exact pleadings, arguments, and declarations the Board has already considered and rejected as out-of-scope, immaterial, and/or lacking an adequate basis

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[266] 10 C.F.R. § 2.323(e) (providing that a motion for reconsideration must be filed within ten (10) days of the action for which reconsideration is requested).

[267] *See Shoreham*, LBP-91-39, 34 NRC at 284 n. 33.

[268] 10 C.F.R. § 2.323(e). In its Statements of Consideration for the 2004 changes to the NRC's Rules of Practice, the Commission stated that it "intended to permit reconsideration only where manifest injustice would occur in the absence of reconsideration, and the claim could not have been raised earlier. In the Commission's view, reconsideration should be an extraordinary action and should not be used as an opportunity to reargue facts and rationales which were (or should have been) discussed earlier." Changes to Adjudicatory Process, 69 Fed. Reg. 2,182, 2,207 (Jan. 14, 2004).

[269] 10 C.F.R. § 2.323(e).

[270] *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-38, 54 NRC 490, 493 (2001) (citation omitted), *citing Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-17, 48 NRC 69, 73-74 (1998).

or point to facts that were not in evidence when the Board issued LBP-12-27[271] and the Contention 6 Order.[272] As noted above, repeating arguments previously presented or pointing to facts not in evidence at the time the Board issued a decision do not present a basis for reconsideration.[273] Thus, Intervenors do not meet the reconsideration standards[274] and their attacks on LBP-12-27 and the Board's Contention 6 Order should be rejected.

## CONCLUSION

For the reasons set forth above, the Board should deny Intervenors' Motions and find Contention 7 as amended inadmissible.

Respectfully submitted,

***Signed (electronically) by***

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[271] E.g., the cracks identified in August/September 2013, the concrete void identified in February 2014, and the damaged rebar of February 2014.

[272] E.g., FENOC's July 3, 2014 RAI Response.

[273] *Nuclear Engineering Co.* (Sheffield, Illinois Low-Level Radioactive Waste Disposal Site), CLI-80-1, 11 NRC 1, 5 (1980); *See also Wisconsin Elec. Power Co.* (Point Beach Nuclear Plant Unit No. 2), 4 AEC 678, 678 (1971) (Commission finding no sound basis for reconsidering arguments made to and considered by it in a prior order). See *Independent Spent Fuel Storage Installation*, LBP-01-38, 54 NRC at 493.

[274] Intervenors' Motion for Admission of Contention 7 also does not meet the standards for reopening a closed record as there was no initial decision with respect to Contention 5 or 6.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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| In the Matter of | ) | |
| | ) | |
| FIRSTENERGY NUCLEAR OPERATING CO. | ) | Docket No. 50-346-LRA |
| | ) | |
| (Davis-Besse Nuclear Power Station, Unit 1) | ) | |
| | ) | |

CERTIFICATE OF SERVICE

Pursuant to 10 C.F.R. § 2.305 (revised), I hereby certify that copies of the "NRC STAFF'S ANSWER TO INTERVENORS' MOTION FOR ADMISSION OF CONTENTION NO. 7 ON WORSENING SHIELD BUILDING CRACKING AND INADEQUATE AMPS IN SHIELD BUILDING MONITORING PROGRAM" have been served upon the Electronic Information Exchange, the NRC's E-Filing System, in the above captioned proceeding, this 3rd day of October, 2014.

***/Signed (electronically) by/***
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Date: October 3, 2014